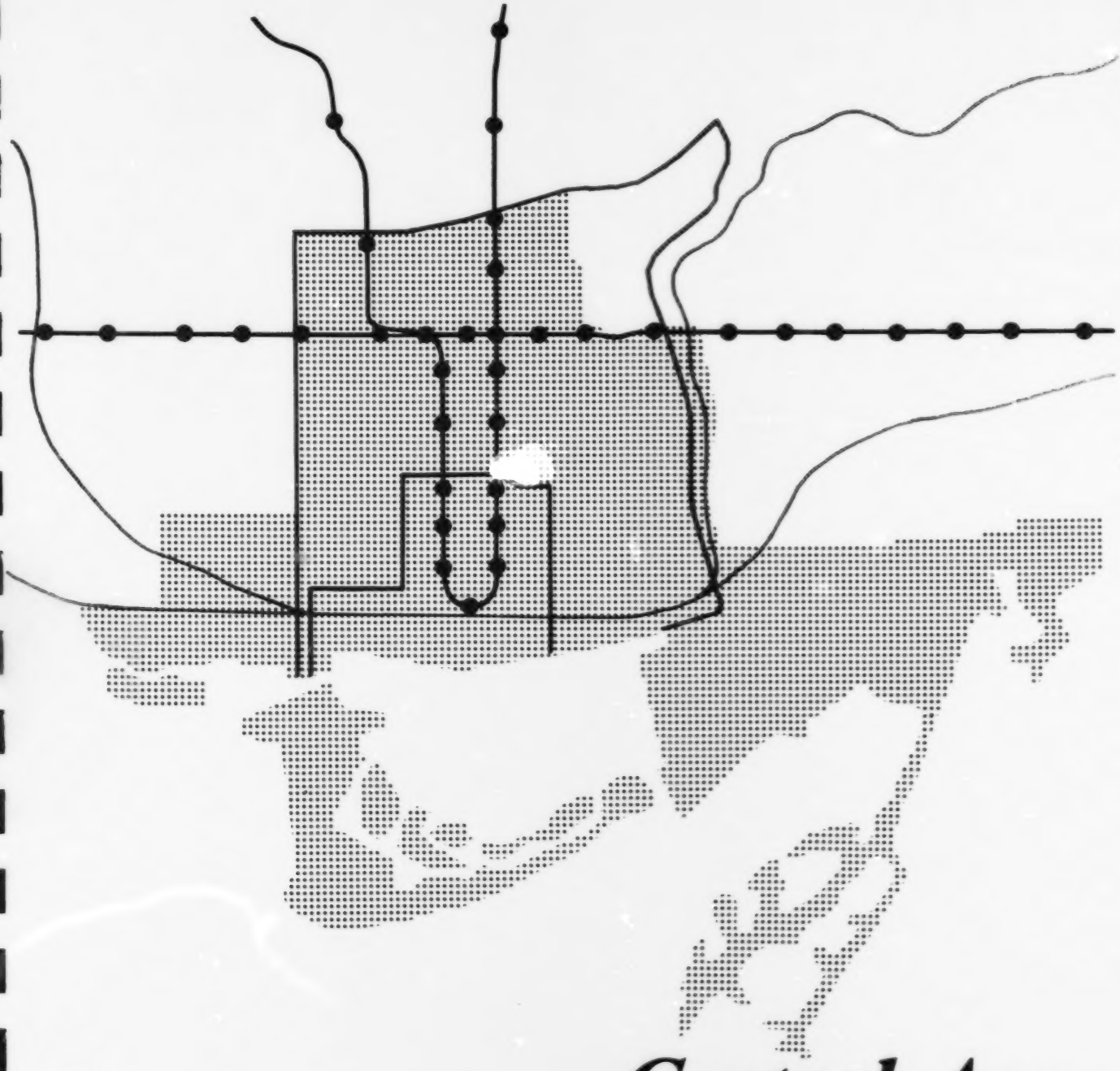

Central Area Monitoring Program

A Joint Program of:
CITY OF TORONTO
MUNICIPALITY OF METROPOLITAN TORONTO
TORONTO TRANSIT COMMISSION

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Second Annual Report - June 1988

Prepared by Metropolitan Toronto Planning Department

CENTRAL AREA MONITORING PROGRAM

A Joint Program of:

City of Toronto

The Municipality of Metropolitan Toronto

Toronto Transit Commission

SECOND ANNUAL REPORT

Prepared by:

Metropolitan Toronto Planning Department

June, 1988

89-05672/

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1 INTRODUCTION

1.1 Background

The Central Area Monitoring Program (C.A.M.P.) was formally initiated by Metropolitan Toronto and the City of Toronto in 1985, as a result of concerns regarding levels of congestion on the road and transit facilities serving the Toronto Central Area, and the effect of potential additional travel generated by major new office and other commercial developments proposed for the downtown area. The first report in this series, published in September, 1987, gave extensive background information, including details of numerous studies of proposed transportation improvements affecting the Central Area undertaken over the past fifteen years, as well as subsequent actions taken by Metropolitan Council. It also cited references to the need for a comprehensive monitoring program, to assist in coordinating new development with needed transportation system improvements. The reader is referred to that report for additional background information.

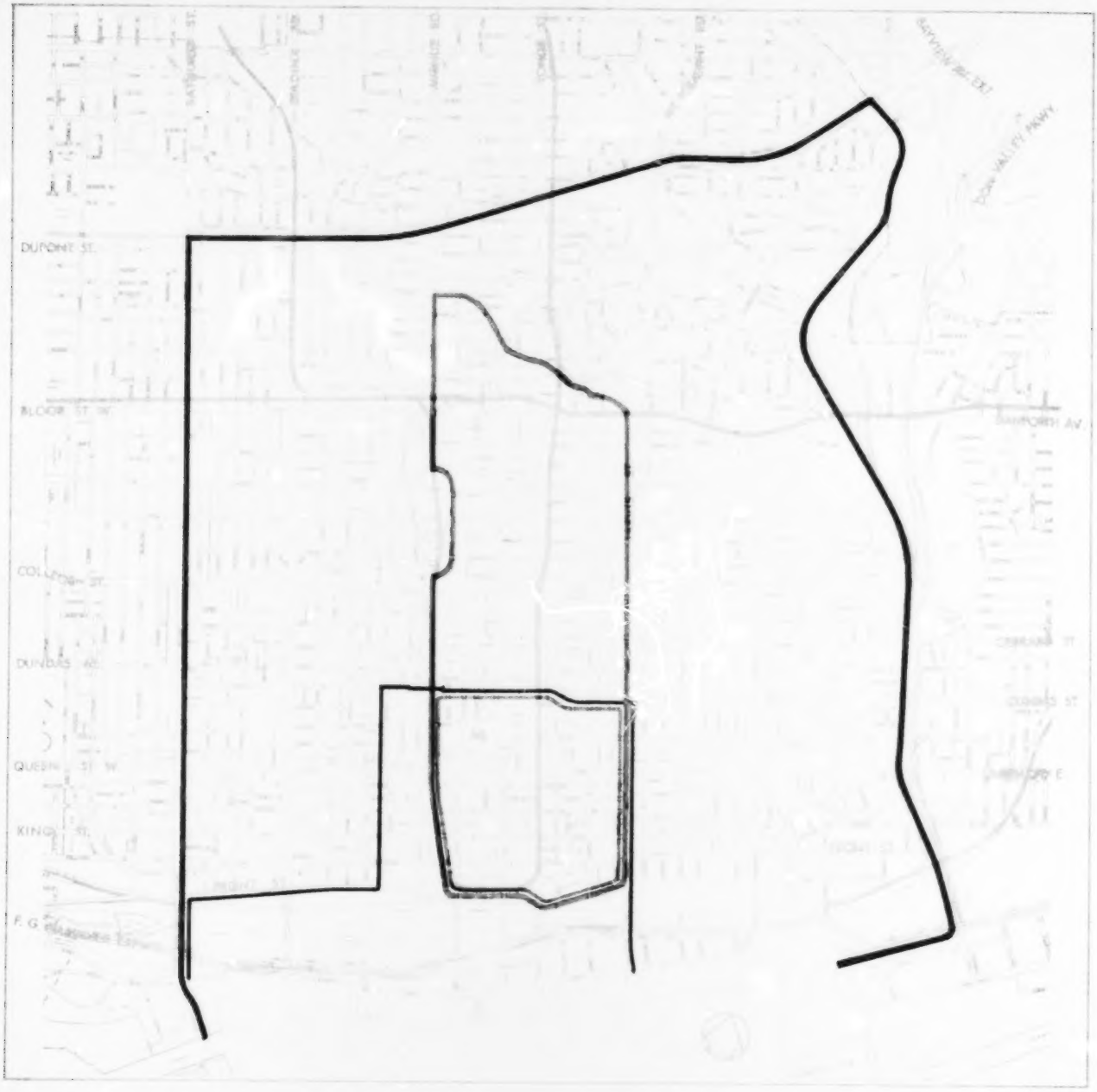
1.2 Objectives of the Program

The objectives of the Central Area Monitoring Program, as identified in the previous report, are as follows:

(a) to document a number of key Central Area variables such as transportation system usage, travel characteristics, office floor space, vacancy rates, population, labour force and employment;

(b) to identify causal transportation relationships which will facilitate the estimation of travel generated by proposed future developments, and hence:

(c) to identify the need and timing for additions or improvements to the transportation system required to accommodate the proposed developments.



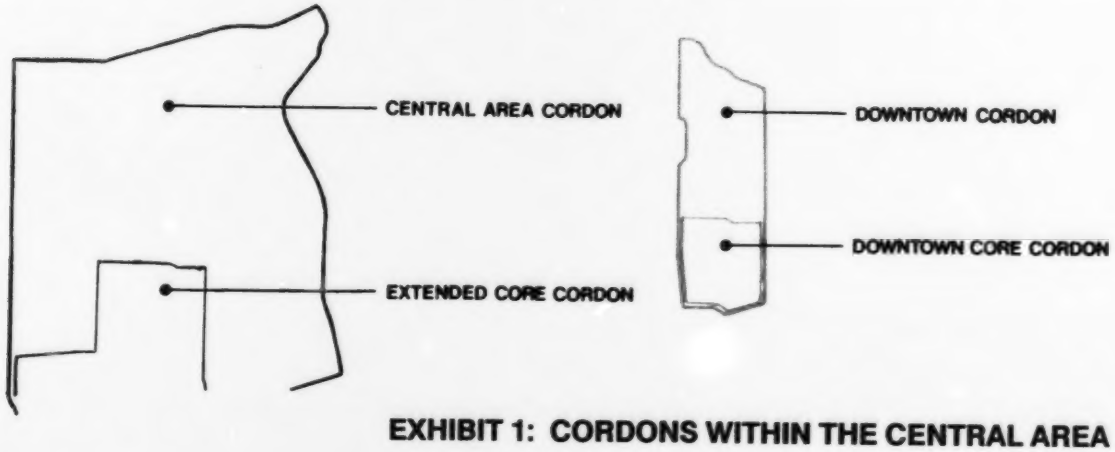


EXHIBIT 1: CORDONS WITHIN THE CENTRAL AREA

1.3 Contents of Report

The previous C.A.M.P. report documented the situation in the Central Area as of 1986 with respect to existing development, employment levels and transportation system usage, with the emphasis on peak periods, and presented time series data from previous years where available. This report, the second in an annual series, includes additional data collected or made available in 1987.

The information presented falls into two main categories: that collected on an ongoing basis such as cordon counts and employment data, and periodic or one-time data collection efforts such as the quinquennial Census and specific travel behaviour surveys. In terms of the objectives listed above, the annual C.A.M.P. reports are addressed primarily to objective (a). It is intended that the factual and statistical information presented will assist each of the Metropolitan and City of Toronto agencies involved in planning for the Central Area to address the second and third objectives.

As the Program proceeds, the availability of additional time series data will enhance the planning agencies' ability to identify trends and project transportation requirements into the future.

1.4 Study Area

Most Metropolitan and City of Toronto reports define the "Central Area" as Metropolitan Planning District No. 1 (referred to as **PD1**). The study area for C.A.M.P. is the area enclosed by the **Central Area Cordon**, which was established by the City of Toronto in 1970 for the purpose of monitoring inbound and outbound vehicle and person flows. The cordon was incorporated into the Metro Cordon Count Program when the latter was established in 1975. The area is bounded by Bathurst Street on the west, by the C.P. North Toronto rail line on the north, by the Moore Park Ravine and Bayview Avenue Extension on the east, and by the waterfront on the south. For demographic purposes, the area enclosed by the cordon is assumed to include the Toronto Islands residential community, which has ferry access within the cordon, but not the Island Airport, access to which is outside of the cordon.

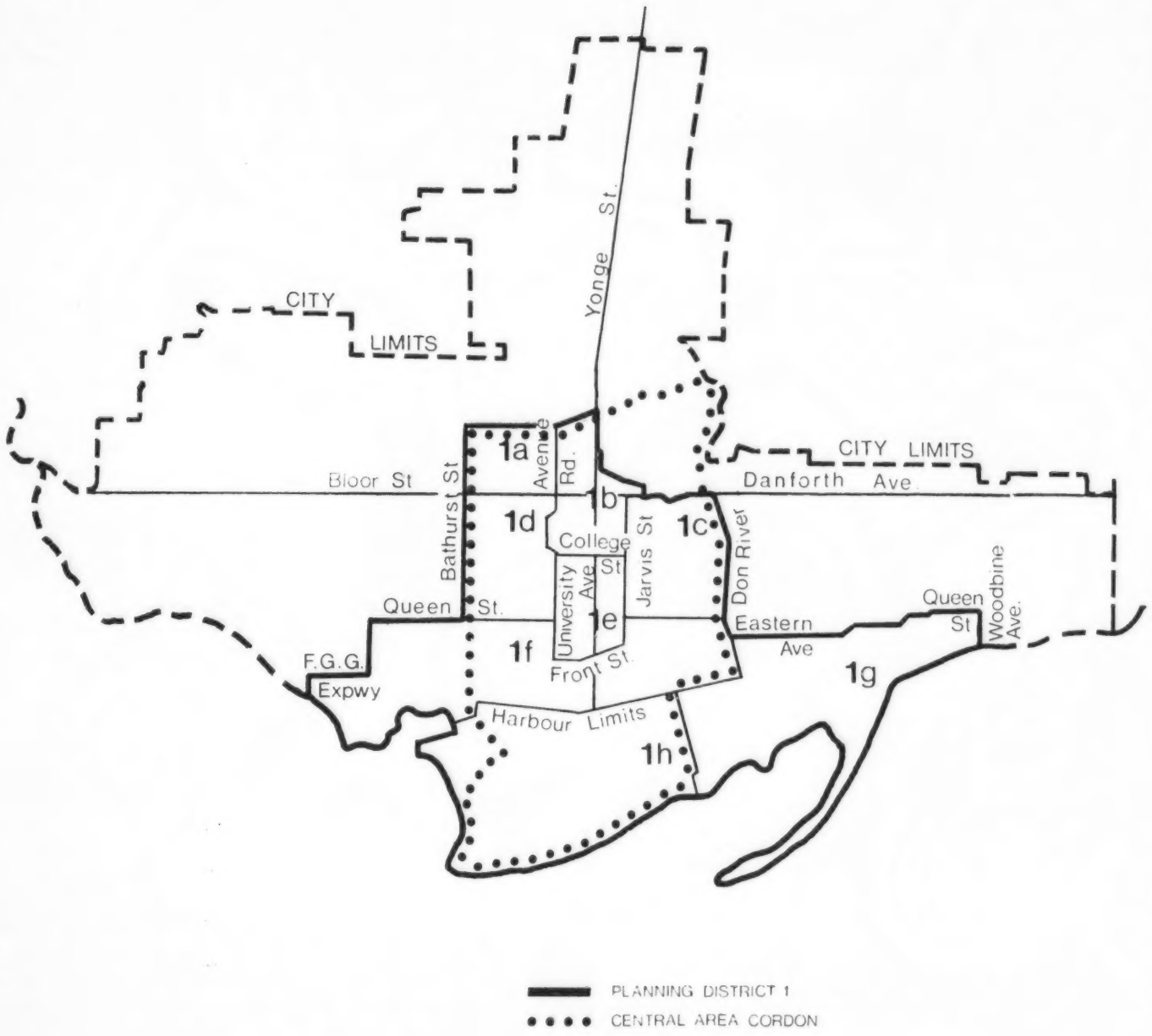


EXHIBIT 2: THE CENTRAL AREA AND PLANNING DISTRICT 1

The report also presents data for three other cordons which have been defined within the Central Area. The **Extended Core Cordon** was established in 1985, specifically for C.A.M.P., to incorporate both the traditional financial district and the newly-developing areas to the west of University Avenue and south of Front Street, including Harbourfront and the Railway Lands. This cordon is bounded by Bathurst, Front and John Streets on the west, Dundas Street on the north and Jarvis Street on the east. In 1985, an annual count program was instituted for the Central Area and Extended Core Cordons, which are intended to provide the main traffic count input to C.A.M.P.

Information is also presented for the **Downtown Cordon**, bounded by University Avenue, Davenport Road/Church Street, Jarvis Street and Front Street, and for the **Downtown Core Cordon**, which is that part of the Downtown Cordon south of Dundas Street. These cordons have been counted historically by the City of Toronto, and will continue to be counted every second year. Exhibit 1 illustrates the boundaries of the four cordons referred to above, while Exhibit 2 compares the boundaries of the Central Area Cordon and PD1.

1.5 Participants

The following departments and agencies are represented on the Central Area Monitoring Program project team and/or provide input to the Program:

Metropolitan Toronto Planning Department;
Metropolitan Toronto Roads and Traffic Department;
City of Toronto Planning and Development Department;
City of Toronto Public Works Department
Toronto Transit Commission (T.T.C.), Planning Branch;
GO Transit, Corporate Planning Branch;
Ministry of Transportation (M.T.O.), Municipal Transportation Policy Planning Branch

The contributions of all these agencies are gratefully acknowledged.

2 SOURCES OF INFORMATION

The Central Area Monitoring Program brings together data from a variety of sources, some of them ongoing data collection programs and some of them one-time studies and special surveys related to the Central Area. The following is a summary of the major data sources relevant to the Central Area:

2.1 Metro Cordon Count Program

The Metro Cordon Count Program is described in detail in the previous C.A.M.P. report, and in the report "Metro Cordon Count Program - 1987" published by the Metropolitan Planning Department. Briefly, it involves one-day manual roadside counts of vehicles (private, commercial and transit) and occupants crossing a series of screenlines by 15-minute periods, supplemented by subway and GO Train passenger counts provided by T.T.C. and GO Transit, respectively. As indicated previously, counts at the Central Area and Extended Core Cordons are taken annually, while at the Downtown and Downtown Core Cordons they are taken every second year (1986,1988 etc.).

2.2 Other Transportation Counting Programs

The T.T.C. collects passenger counts by train at key locations on the subway system on a monthly basis, and provides annual summaries of all-day and maximum hour counts. Subway station platform usage counts are taken annually and are summarized in the form of time series tables. On-board and roadside passenger counts of surface transit routes are also taken to monitor load factors and to tailor service frequency to demand. Modal split surveys at subway terminals and subway station origin-destination counts are taken less frequently. GO Transit takes complete station on/off counts for all trains several times a year, as well as GO Bus counts and periodic origin-destination surveys. The Metropolitan Roads and Traffic Department and the City of Toronto Public Works Department have programs of automatic counts to monitor traffic at key locations, and to assist in optimizing traffic signal timings.

2.3 Metro Employment Survey

Since 1981, the Metropolitan Toronto Planning Department has undertaken an annual survey program to provide up-to-date information on full-time employment throughout Metropolitan Toronto. Part-time employment counts were added in 1982. This information is collected through personal visits to establishments which are classified as non-residential for assessment purposes. Typically, about half of the establishments are surveyed each year, resulting in some lag in the data in areas experiencing rapid change, such as the Central Area. In recognition of this, and in connection with C.A.M.P., the sample rate within PD1 was increased to 100 percent in 1986 and 1987, with the aid of a Provincial subsidy. The 100 percent survey is scheduled to be continued in 1988.

As a supplement to the Employment Survey, a pilot survey of the travel characteristics of part-time employees was undertaken in 1986, and repeated on a larger scale in 1987. The results of the 1987 survey are summarized later, in Section 3.5 of this report.

2.4 Office Space Survey

The Metropolitan Planning Department maintains a computerized Office Data Bank of existing office space, as well as information on proposed office developments in various stages of approval. Information for the Central Area is obtained from the City of Toronto, and includes data from an annual survey conducted by Royal LePage of rented and vacant space in office buildings with over 20,000 sq.ft. (1,858 sq.m.) of net rentable office area. The Royal LePage survey covers approximately 300 buildings in the Central Area. Information from the Office Data Bank facilitates a detailed examination of the current distribution of office space, as well as a review of trends in the supply and demand of office space and in rental costs and vacancy rates.

2.5 Central Area Residents' Survey

A mail-back survey of the travel characteristics of 3,400 residents of the Central Area was undertaken on behalf of the City of Toronto Planning and Development Department in 1986. The results of this survey are summarized later in this report, in Section 3.6.

2.6 Downtown Employment Study

The City of Toronto sponsored a series of sub-studies under a Downtown Employment Study Steering Committee to examine the future for office employment and the demand for space in the Central Area. Four consultant reports and two reports prepared by City staff are reviewed in Section 3.7 of this report.

3 FINDINGS

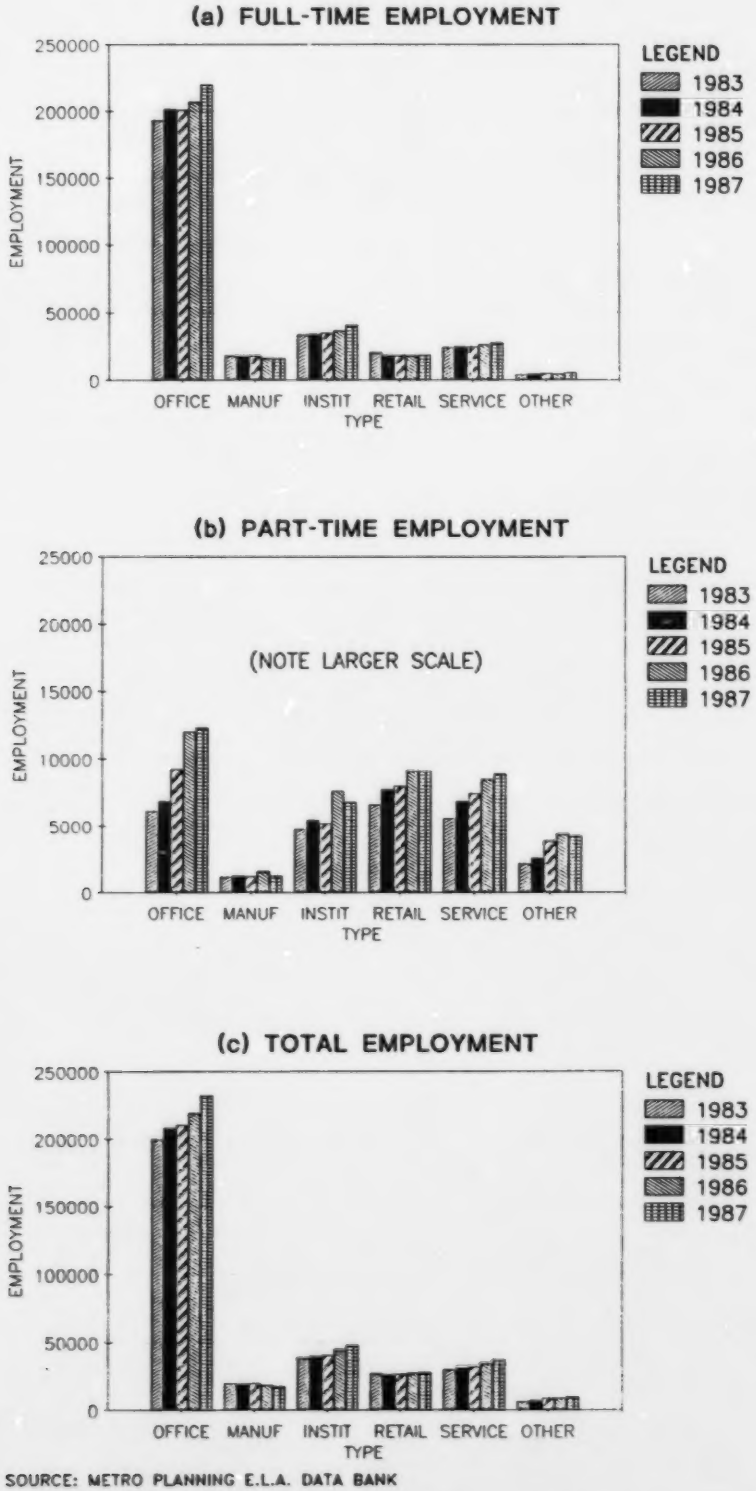
3.1 Employment

Information presented in the previous C.A.M.P. report on employment within each of the four cordons identified in Exhibit 1 has been updated on the basis of the 1987 Metro Employment Survey.

In the area enclosed by the **Central Area Cordon**, according to the survey data, total employment in all sectors increased by 18,250 or 5.1% between 1986 and 1987. (See Exhibit 3.) This is the largest annual increase recorded since the first full survey was undertaken in 1983. Part-time employment showed a net decrease of 700, declining from 12.3% to 11.5% of total employment. In the Office sector, total employment increased by 13,200 or 6.0%; part-time employment showed a slight increase of 300 and its share of total employment fell from 5.5% to 5.3%. The Office sector represented 62.4% of total employment in the Central Area, compared to 61.8% in 1986. With the exception of Manufacturing/Wholesaling, all other sectors showed moderate increases in total employment. Part-time employment decreased slightly in all sectors except Office and Service, and the part-time share of total employment declined in all sectors.

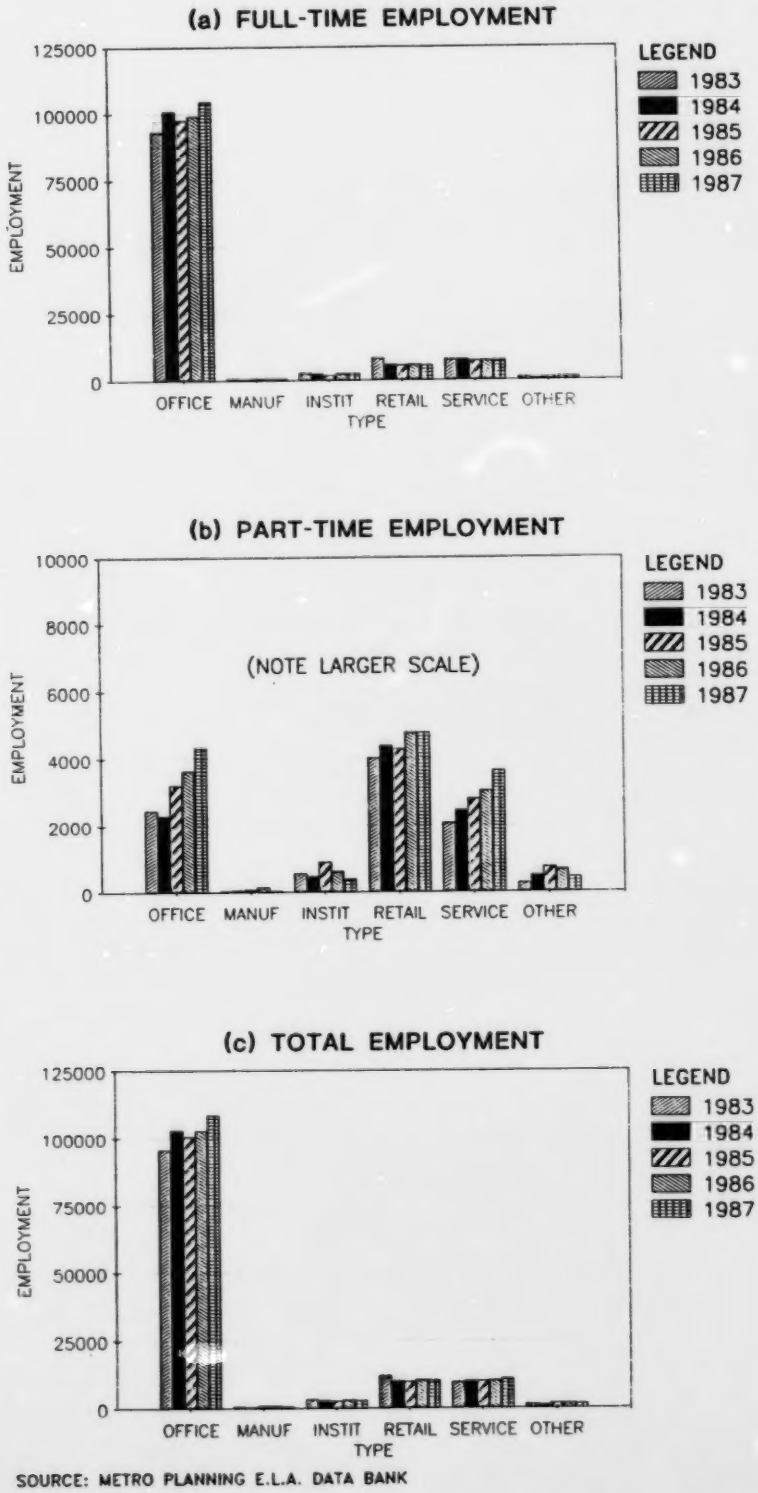
Within the **Downtown Core Cordon**, as illustrated in Exhibit 4, total employment increased by 5,750 or 4.4% between 1986 and 1987; part-time employment increased by 700, while part-time as a proportion of full-time rose marginally from 10.0% to 10.1%. In the Office sector, which accounted for 80.0% of the employment within the cordon in 1987, compared to 79.0% in 1986, total employment increased by 5,900 or 5.7%, while part-time increased by 700 or 19%, rising from 3.5% to 4.0% of total employment. Service sector employment increased by 600 in part-time with no change in full-time, while the remaining sectors showed small decreases in total employment.

EXHIBIT 3: EMPLOYMENT WITHIN CENTRAL AREA CORDON, 1983-1987



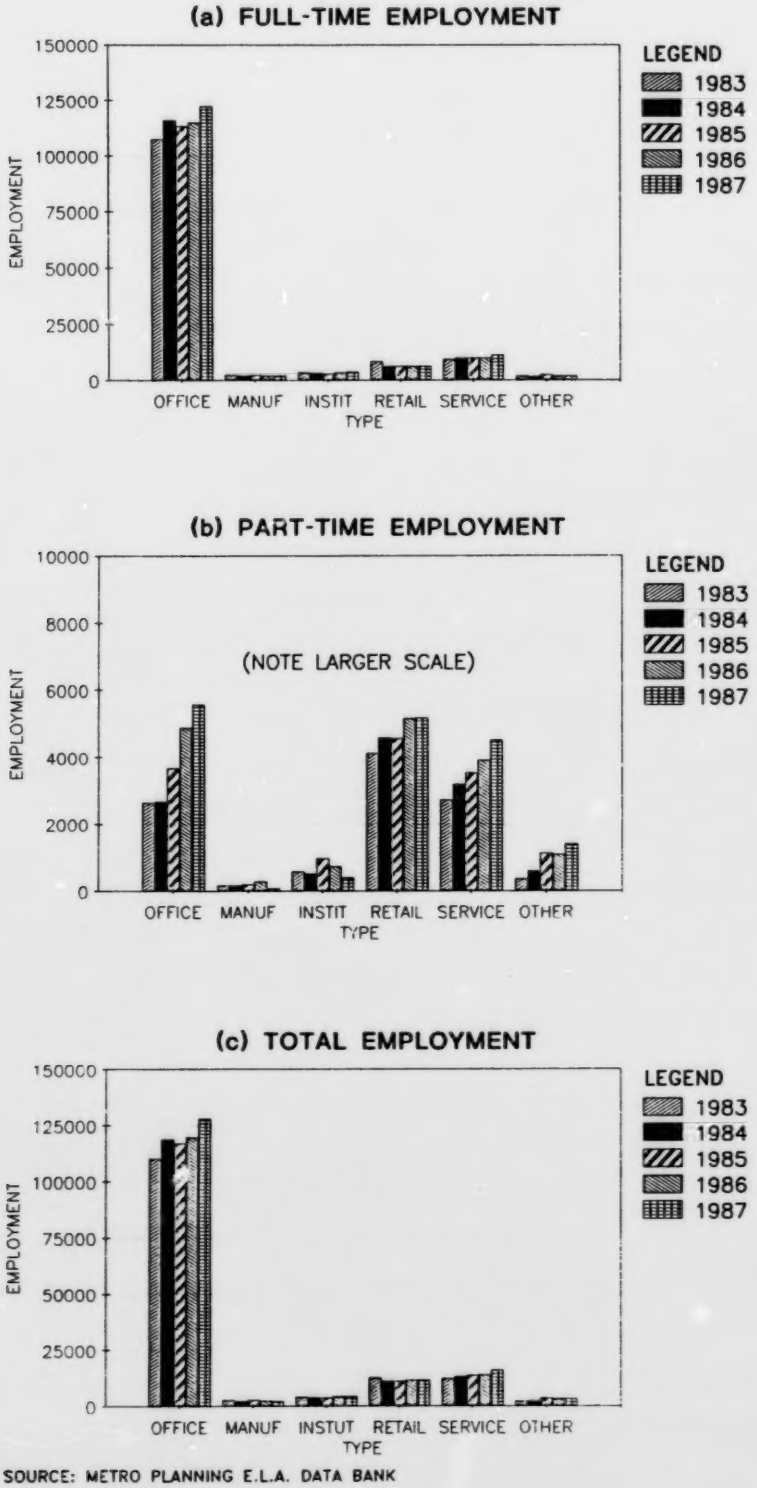
SOURCE: METRO PLANNING E.L.A. DATA BANK

EXHIBIT 4: EMPLOYMENT WITHIN DOWNTOWN CORE CORDON,1983-1987



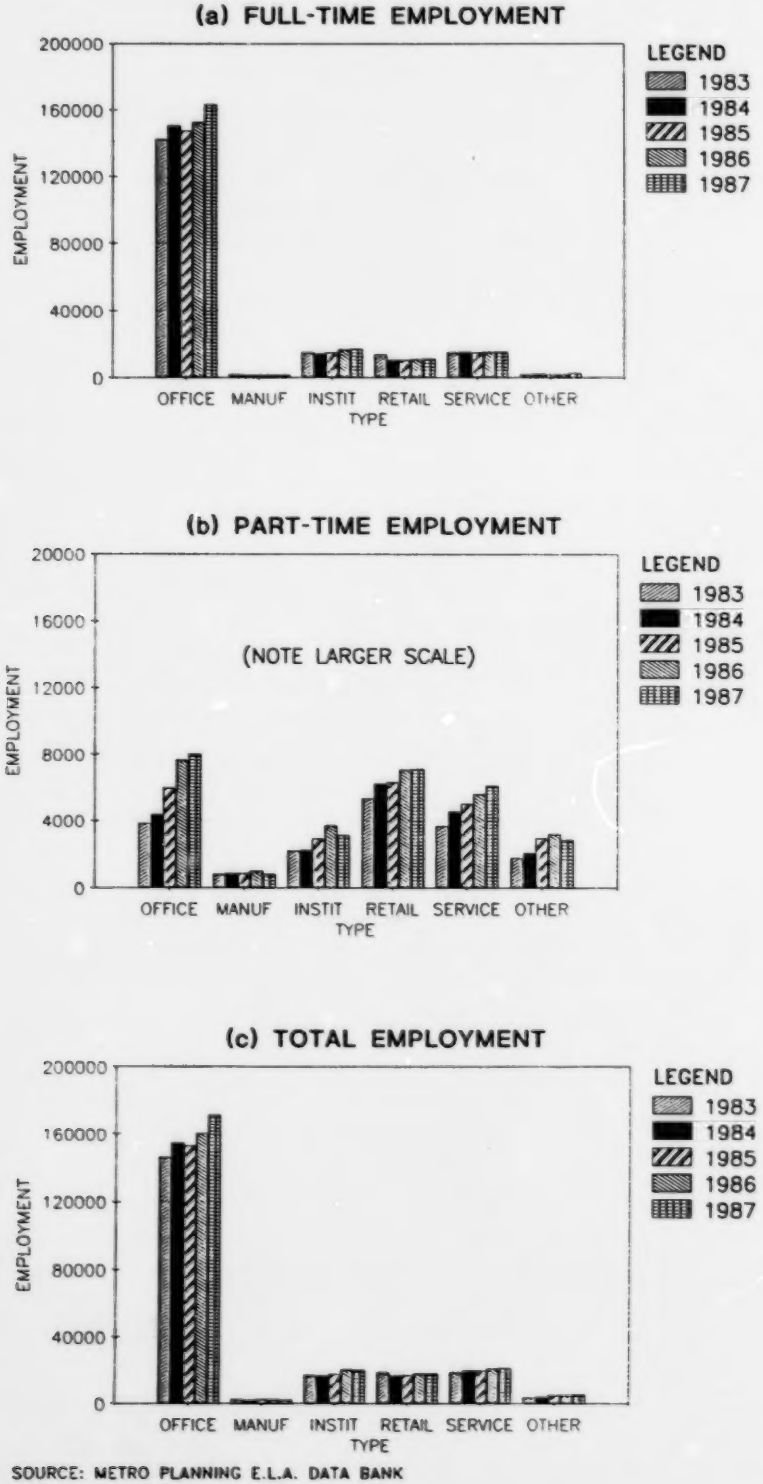
SOURCE: METRO PLANNING E.L.A. DATA BANK

EXHIBIT 5: EMPLOYMENT WITHIN EXTENDED CORE CORDON, 1983-1987



SOURCE: METRO PLANNING E.L.A. DATA BANK

EXHIBIT 6: EMPLOYMENT WITHIN DOWNTOWN CORDON, 1983-1987



SOURCE: METRO PLANNING E.L.A. DATA BANK

Exhibit 5 shows employment trends within the **Extended Core Cordon**. In the area outside of the Downtown Core (i.e. west of University Avenue and south of Front Street), total employment grew by 4,525 or 17.6% between 1986 and 1987. Office sector employment increased by 2,375 or 13.9%, and Service by 1,300 or 36.5%. Institutional, Retail and Other sectors grew by smaller amounts, while Manufacturing/Wholesaling declined slightly. Part-time employment in the Other sector rose by 550, with declines in the remaining sectors except Retail, giving a net growth of 400 or 12.9%

Exhibit 6 summarizes employment within the **Downtown Cordon;** outside of the Downtown Core (i.e. north of Dundas Street), the growth in total employment was 5,350 or 5.4%, while Office employment grew by 5,050 or 9.8% and Service declined by 150 or 1.4%. Retail and Other showed moderate increases, while Manufacturing/Wholesaling and Institutional declined slightly. Part-time employment decreased by 850 or 5.6%, mostly in the Office and Institutional sectors.

In the periphery of the Central Area Cordon, outside the three inner cordons, the survey indicated a net increase in total employment of 2,625, while the Office sector showed a net decrease of 125 between 1986 and 1987. The most significant change was in Institutional, with an increase of 3,000 or 13.1%. Other sectors showed only minor changes.

In summary, employment showed strong growth between 1986 and 1987 in the Office sector within the Downtown Cordon (including the Downtown Core), and in the Service sector within the Extended Core Cordon (also including the Downtown Core). Institutional employment grew significantly in the periphery of the Central Area, while overall, Manufacturing/Wholesaling declined and Retail stayed generally constant. "Other" employment showed moderate growth outside of the Downtown Core. The proportion of part-time employment stayed relatively constant in the Office and Retail sectors, and declined somewhat in other sectors.

3.2 Population

Population data from provincial Assessment files for the period 1981 to 1987 are summarized in Exhibit 7. Total population within the **Central Area Cordon** increased by 2,950 or 2.3% between 1986 and 1987, the highest annual growth recorded during the period 1981 to 1987. The **Downtown Core**, which has only a small resident population, showed a very small increase. Within the **Extended Core Cordon**, excluding the Downtown Core, population increased by 200 or 4.5%, reflecting a small number of residential completions between 1986 and 1987; this is the smallest increase recorded for this area since 1981. Within the **Downtown Cordon** north of Dundas Street, population rose by 1,515 or 6.3%, reflecting continued residential development along the Bay Street corridor. The population in the remaining part of the Central Area grew by 1,190 or 1.2%.

In summary, population continued to exhibit strong growth in the Central Area, in contrast to declines in many other areas of Metropolitan Toronto. Large residential developments recently completed or currently under construction in the Central Waterfront area should result in larger increases within the Extended Core Cordon in future years.

Exhibit 8 indicates the growth in both population and total employment from 1986 to 1987 by sub-area within the Central Area.

3.3 Office Conditions

The previous C.A.M.P. report summarized the history of growth (construction) and absorption (leasing) of office space in the Central Area between 1965 and 1986, based on Royal LePage office surveys, and also presented average rental rates and vacancy rates in the Central Core from 1976 to 1985, as documented in the City of Toronto's Quinquennial Review reports.

At the end of 1986, the vacancy rate for office buildings in the Central Area was 7.9%; in June, 1987 it had fallen to 6.0%, and by December, 1987, it stood at 3.7%. Vacancy was lowest in the vicinity of Bloor Street, at around 2.7%. The vacancy rate has had a history of fluctuation, ranging from a low of 1.8% in 1981

EXHIBIT 7: POPULATION WITHIN CORDONS, 1981-1987

YEAR	CORDON			
	Central Area	Downtown Core	Extended Core	Downtown
1981	120,755	705	3,975	22,090
1982	123,470	710	4,195	22,305
1983	125,105	1,040	4,795	23,245
1984	125,810	1,305	5,105	23,585
1985	127,845	1,700	5,700	25,660
1986	128,620	1,765	6,280	25,970
1987	131,560	1,800	6,515	27,520
Growth 81-87	10,805	1,095	2,540	5,430
(% Growth)	8.9%	155.3%	63.9%	24.6%

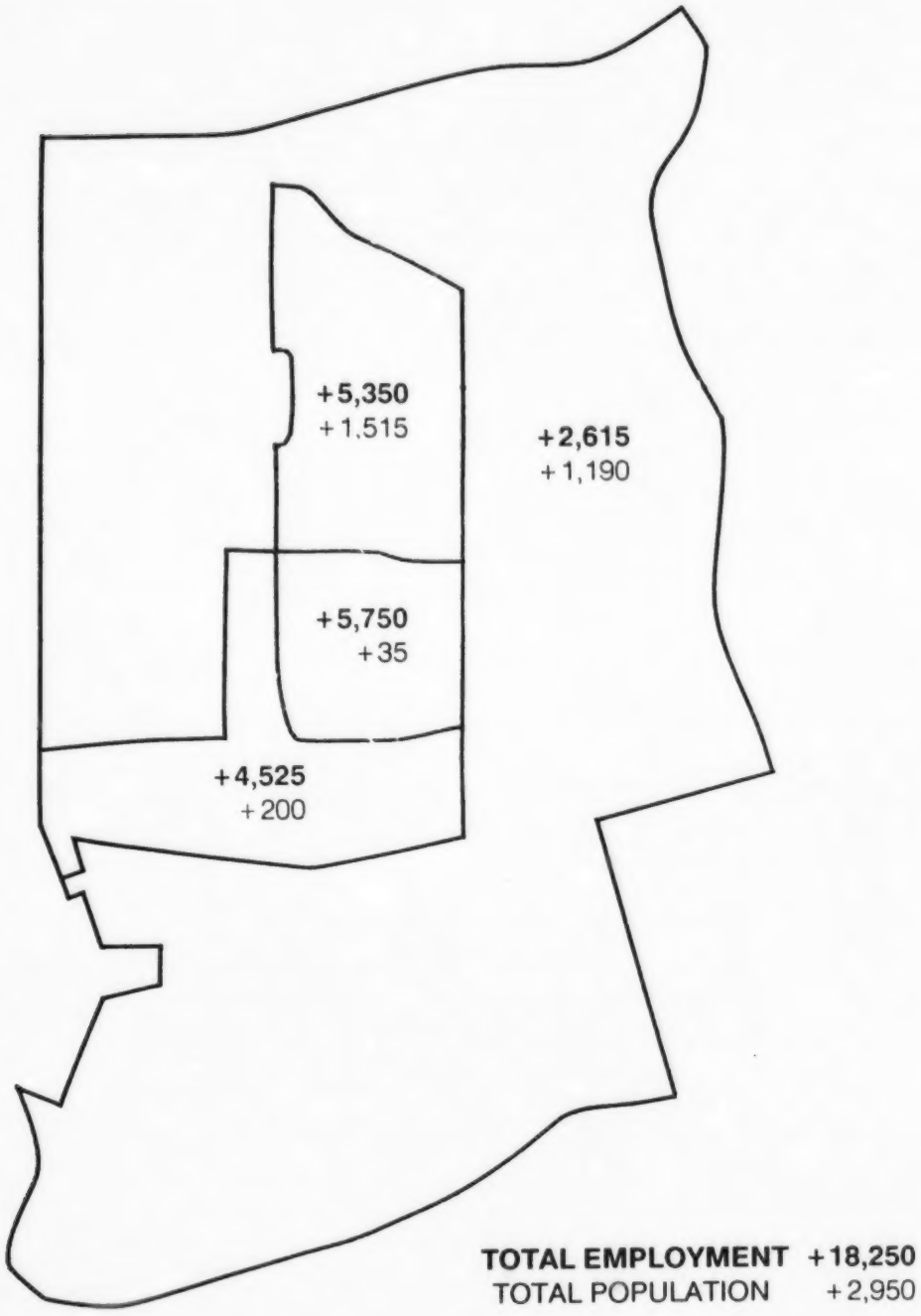


EXHIBIT 8: EMPLOYMENT AND POPULATION GROWTH BY SUB-AREA, 1986-1987

to a high of 12.0% in 1984. According to the City of Toronto Downtown Employment study, a record 312,000 square metres of new office space was leased during 1987 in the Central Core (corresponding roughly to the Downtown plus Extended Core Cordons), compared to an increase in the supply of office space of only 65,000 square metres. The average annual rate of absorption over the previous 5 years was approximately 150,000 square metres.

Annual rental rates for office space tend to follow an opposite trend to vacancy rates; average asking rates per square metre had peaked at $332.00 in March, 1981, then dropped to $279.00 by December, 1984. In December, 1987 asking rental rates for the Downtown Area (roughly the Central Area south of Bloor Street) averaged approximately $355.00, and for the Financial Core $420.00 per square metre. These rates do not reflect space already rented, nor developer incentives which can reduce the actual rents paid.

The amount of office space under construction in the Central Area grew from approximately 300,000 square metres at the end of 1986 to almost 400,000 square metres at the end of 1987, largely due to the start of construction on BCE Place Phase 1, which will account for approximately 120,000 square metres of additional office space.

The previous report also summarized FSW (floor space per worker) ratios based on various surveys undertaken between 1960 and 1985, indicating an average FSW of 26.0 square metres per worker for the Central Core in 1985, based on gross floor area, or 21.4 square metres on a net floor area basis. Comparable City data for 1986/1987 is not presently available; however, data from the Metropolitan Employment Survey for a smaller sample of buildings in the Financial District indicates an average FSW of approximately 25.0 square metres per worker based on net floor area. The Hemson report for the Downtown Employment Study predicted that average FSW rates would increase only slightly from 1985 to 1990.

3.4 Transportation System Usage

This section summarizes the person and vehicle flow data collected under the Metro Cordon Count Program, as well as specific road and transit counts at selected locations.

3.4.1 Cordon Counts

Exhibits A.2 through A.9 in the Appendix are detailed tabulations of count data from the Metro Cordon Count Program for the four Cordons identified within the Central Area, for the period 1975 through 1987. (1986 in the case of the Downtown and Downtown Core Cordons.) Exhibits 9 through 12 are graphical summaries of the trends in passenger flows for peak periods, peak directions.

In a departure from previous reports, counts are summarized for three-hour peak periods instead of the traditional two-hour (7:00 to 9:00 a.m. and 4:00 to 6:00 p.m.) periods, to better represent the actual periods of traffic congestion. Analysis of 1985 and 1986 counts showed that, for the Central Area, the maximum three-hour periods were 7:00 to 10:00 a.m. for morning travel inbound, and 3:30 to 6:30 p.m for outbound travel in the afternoon. Comparisons were made between the two-hour and three-hour counts to determine any trends in "peak spreading"; the results of this analysis are presented in Section 3.4.6. In terms of growth patterns since 1975, trends for the three-hour periods are similar to those for the two-hour periods as presented in the previous C.A.M.P. report and the 1987 Metro Cordon Count Report.

Three-hour counts for 1986 at the Central Area Cordon are not presented, due to some difficulties in re-processing the 1986 data. It should be borne in mind that one-day cordon counts are affected by variables such as weather, accidents and construction. In particular, major reconstruction on the elevated Gardiner Expressway each spring since 1985, involving lane and ramp closures and diversions, has probably affected normal travel patterns, although total cordon volumes should not be affected significantly. In general, vehicle counts are more accurate than passenger counts, since the latter must be estimated, which is often difficult with fast-moving traffic, tinted windows or crowded public transit vehicles. Care should be taken in inferring short-term trends from cordon counts, since year-to-year variations can mask trends.

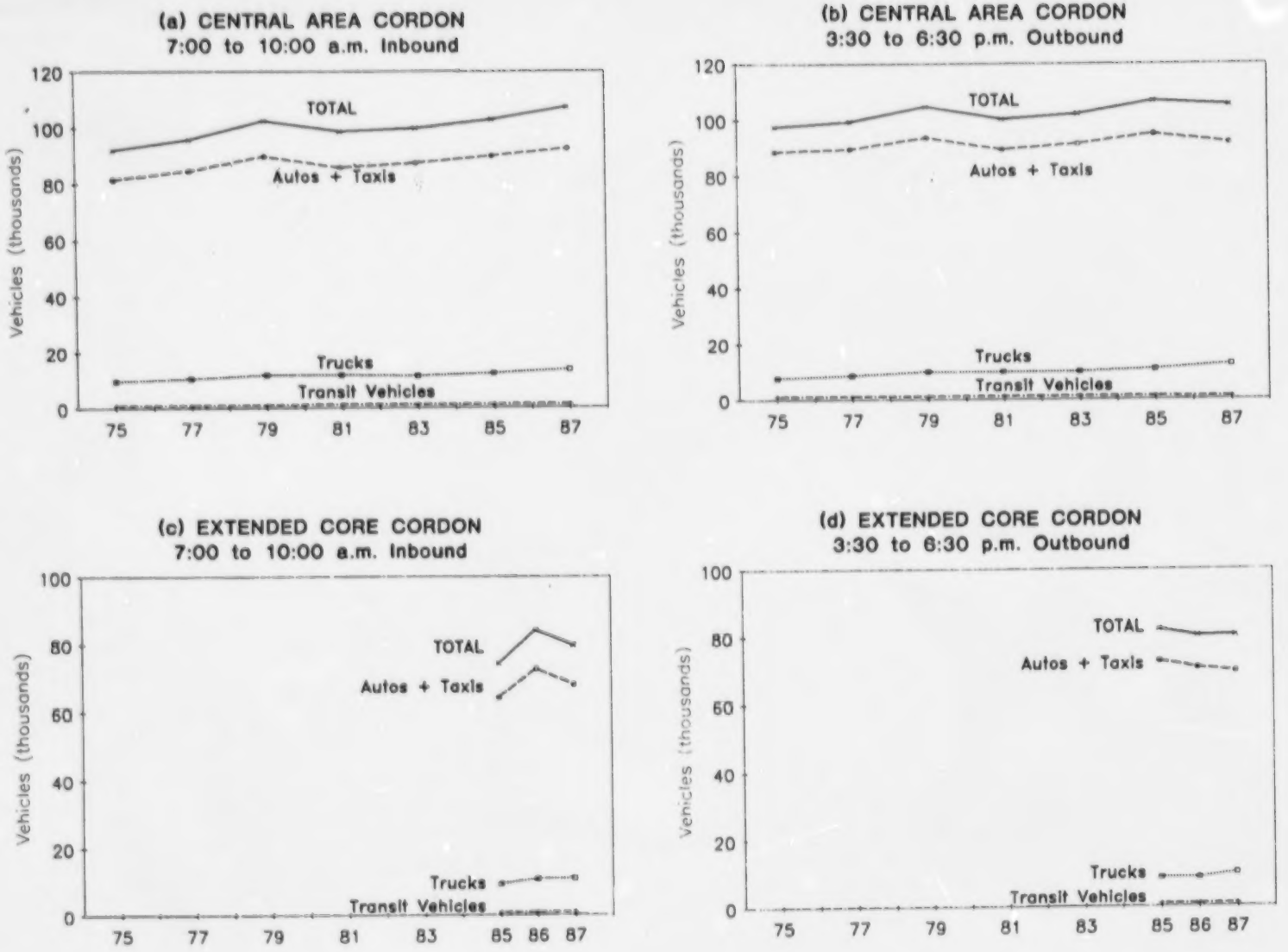


EXHIBIT 9: PEAK PERIOD VEHICLES CROSSING OUTER CORDONS, 1975-1987

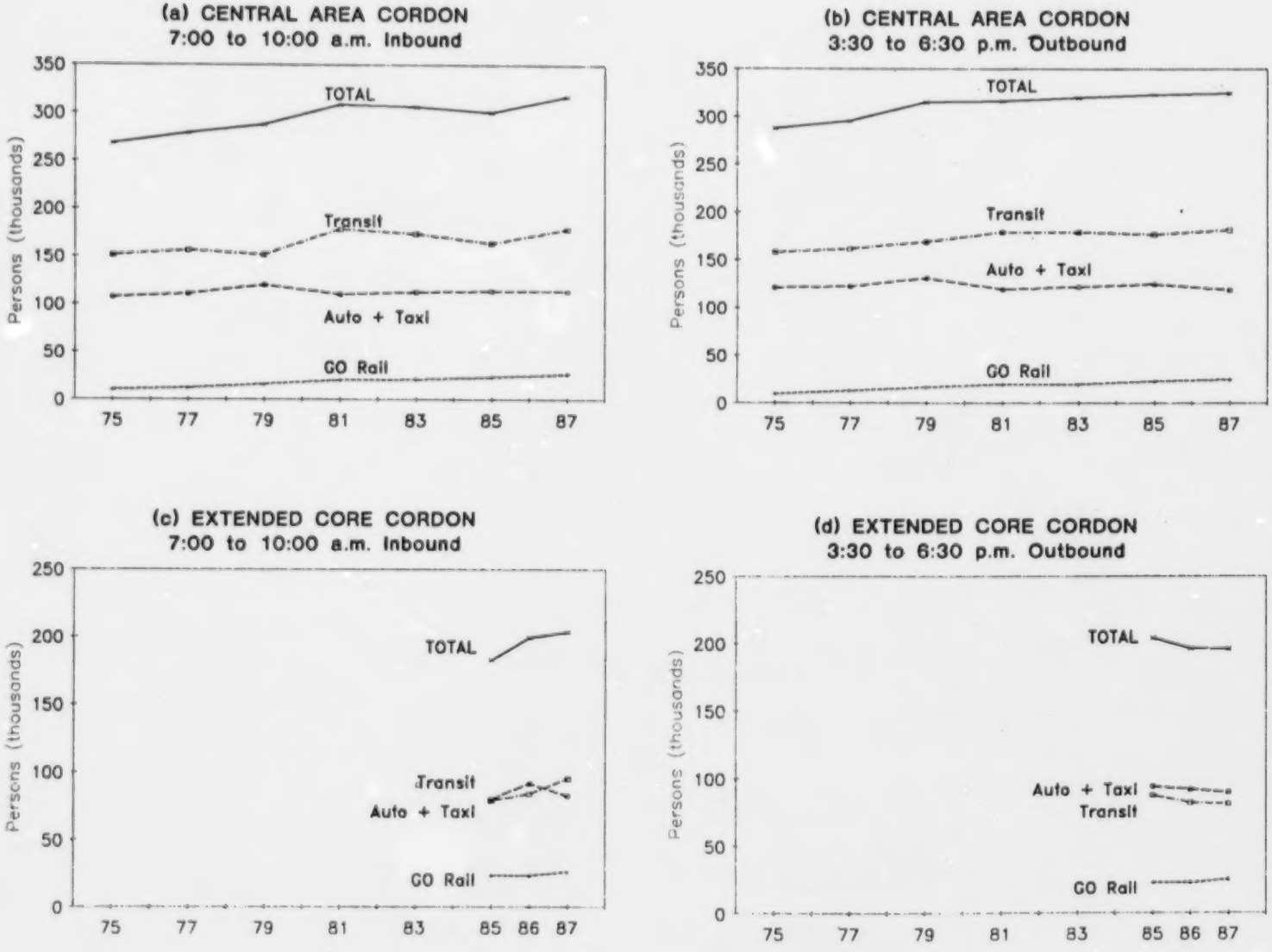


EXHIBIT 10: PEAK PERIOD PERSONS CROSSING OUTER CORDONS, 1975-1987

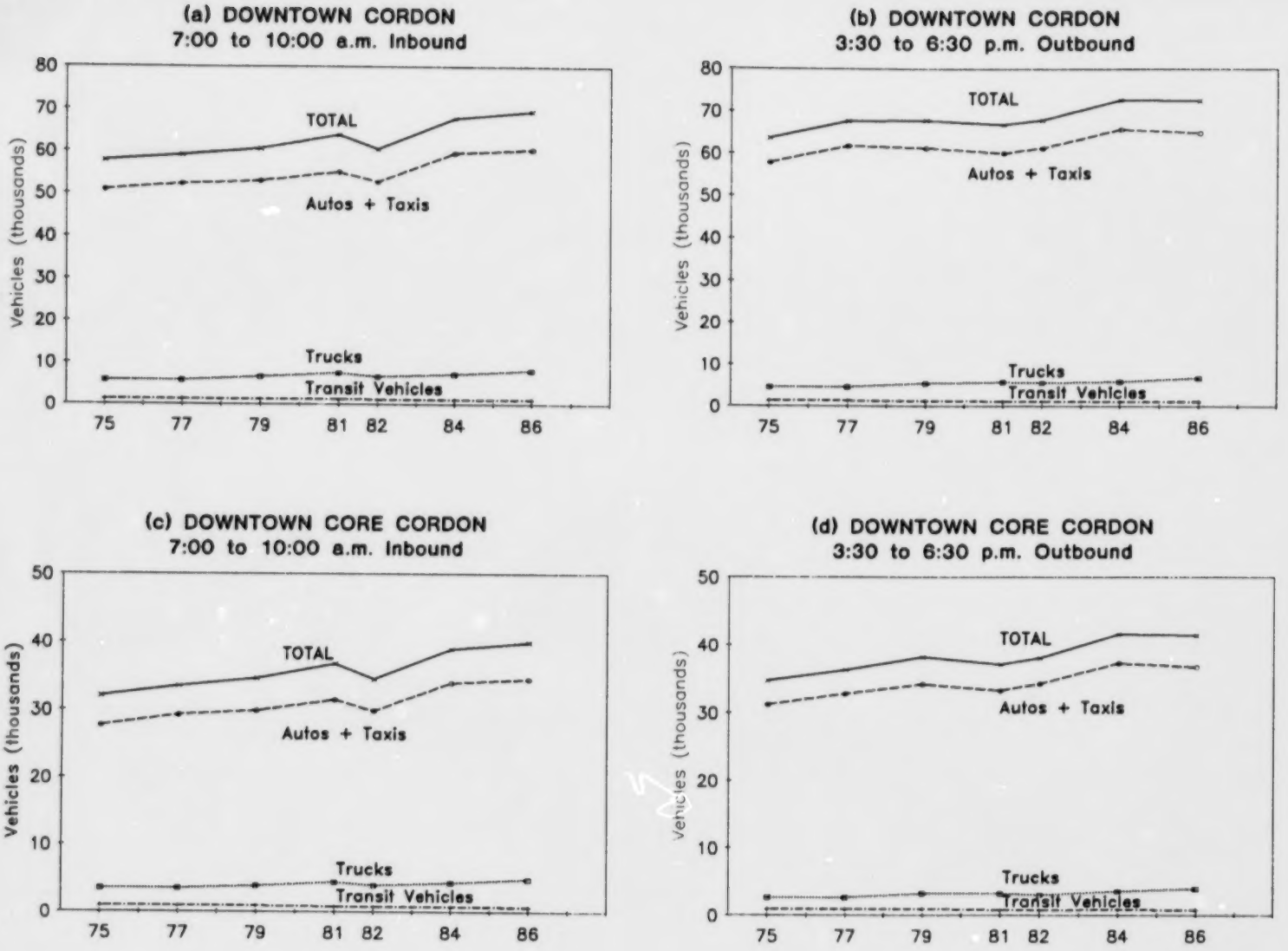


EXHIBIT 11: PEAK PERIOD VEHICLES CROSSING INNER CORDONS, 1975-1986

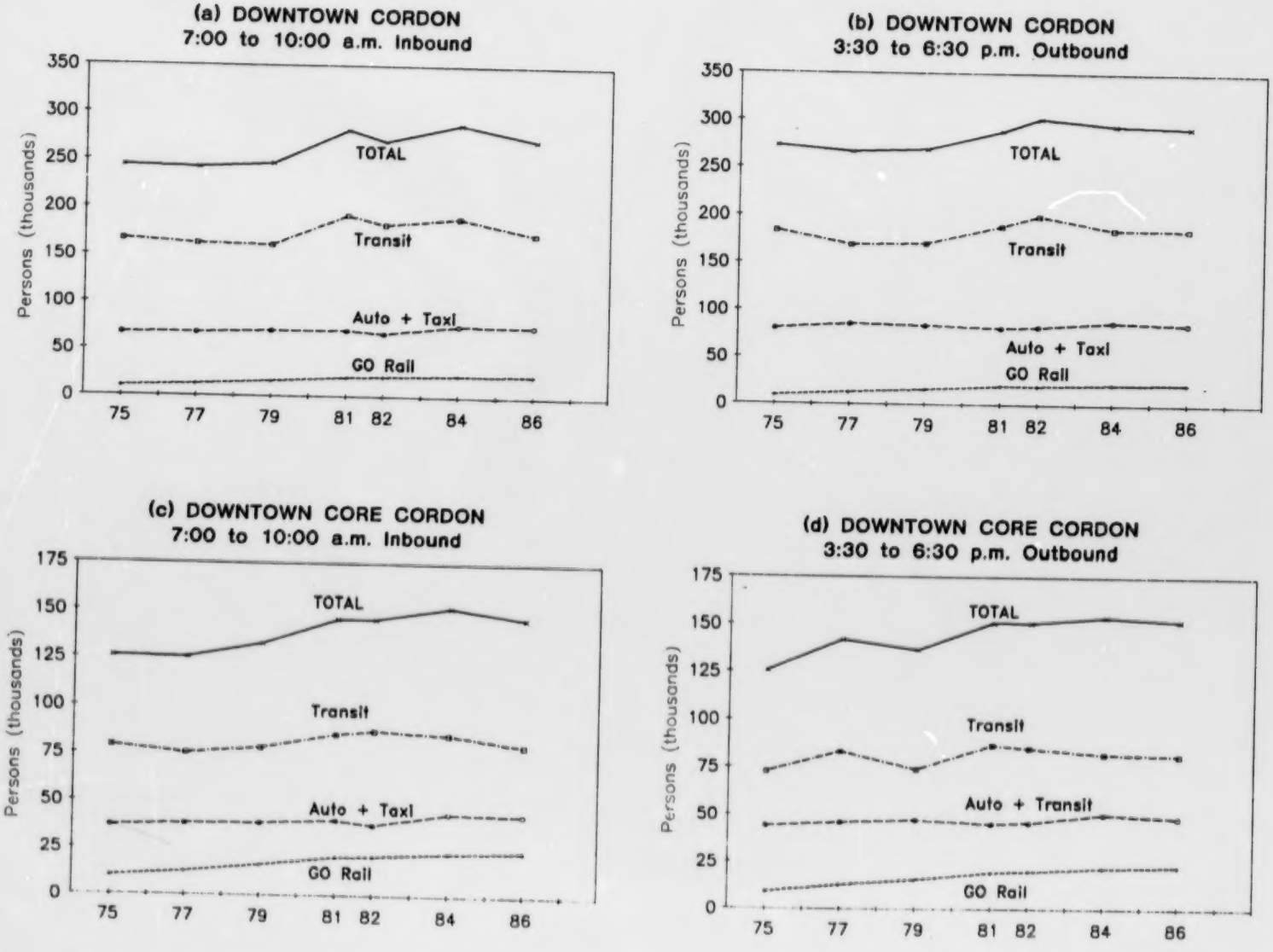
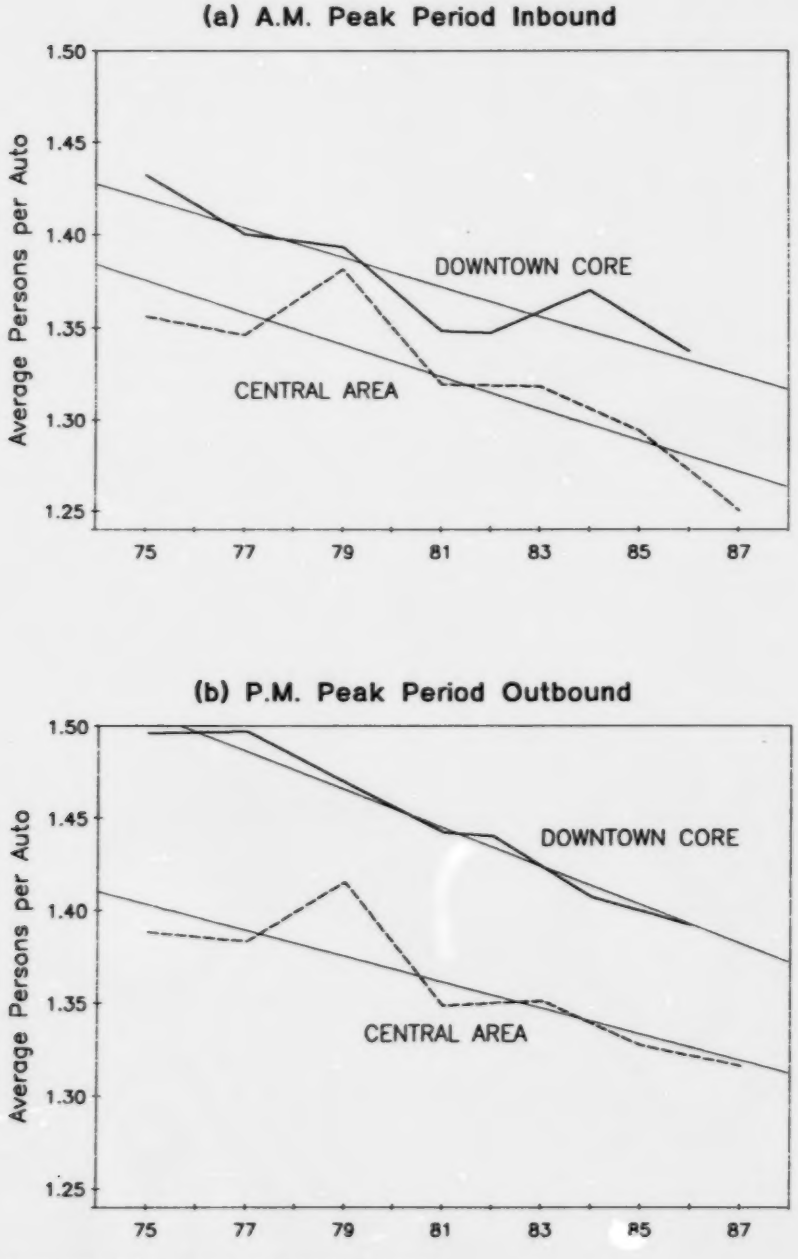


EXHIBIT 12: PEAK PERIOD PERSONS CROSSING INNER CORDONS, 1975-1986

EXHIBIT 13: AUTO OCCUPANCY TRENDS AT CORDONS, 1975-1987



Source: Metro Cordon Count Program

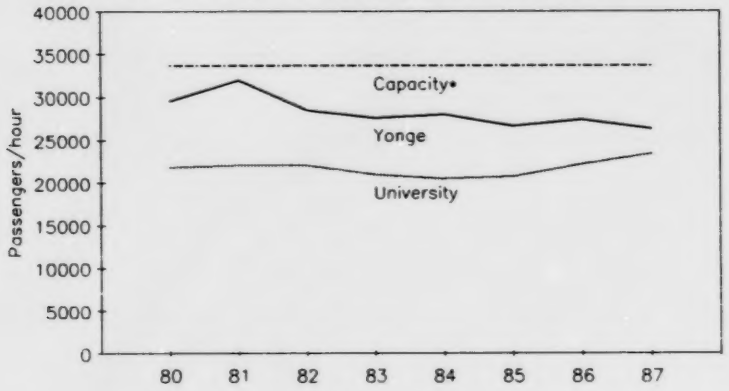
At the **Central Area Cordon** in the a.m. peak period, inbound auto and taxi vehicle flows showed an increase of 3.1%, while truck counts increased by 14.1% between 1985 and 1987. In the p.m. peak period outbound, trucks increased by 17.1% while auto flow showed a decrease of 3.3%. Auto and taxi passenger counts showed negligible change in the a.m. peak period, and declined by 4.7% in the p.m. period. (Since 1975, average auto occupancy has shown a downward trend, as summarized in Exhibit 13.) Transit passengers (bus, streetcar and subway) increased by 8.9% in the a.m. peak period and by 2.7% in the p.m. peak period. GO Rail passengers increased by 11.2% in the a.m and 10.5% in the p.m., continuing past trends; the same findings apply for GO travel at the inner cordons. Overall, for this cordon, auto passenger volumes have stayed fairly steady since 1981, at less than the peak levels reached in 1979, while transit passenger volumes have recovered to the peak levels recorded in 1981.

At the **Extended Core Cordon**, counts are only available for 1985, 1986 and 1987. The growth between 1985 and 1987 in autos, trucks and auto passengers is very similar to that for the Central Area Cordon. The 1986 counts showed a surge in a.m. inbound auto flows, dropping off again in 1987, but the same was not observed in the p.m. peak period, which showed a decline in both 1986 and 1987. Transit passengers showed a significant increase of 19.9% between 1985 and 1987 in the a.m. peak period, but a decrease of 7.1% in the p.m. peak period.

As can be seen from Exhibits 10 and 11, the growth trends in both vehicle and person flows are very similar for the **Downtown Cordon** and the **Downtown Core Cordon**. The major difference is in transit passengers, since the Downtown Cordon intercepts the Bloor-Danforth subway line in addition to the Yonge and Spadina-University lines. Since these cordons were not counted in 1987, the data presented are the same as in the previous C.A.M.P. report, but for the revised peak periods. In summary, transit passenger flows in 1986 remain somewhat below the peak levels reached in 1981/1982, while GO train travel continues to increase and auto person travel is experiencing a slow upward trend. Auto vehicle flows show a stronger upward trend, due to declining average occupancy, while truck volumes have continued to increase steadily after a slight dip in 1982.

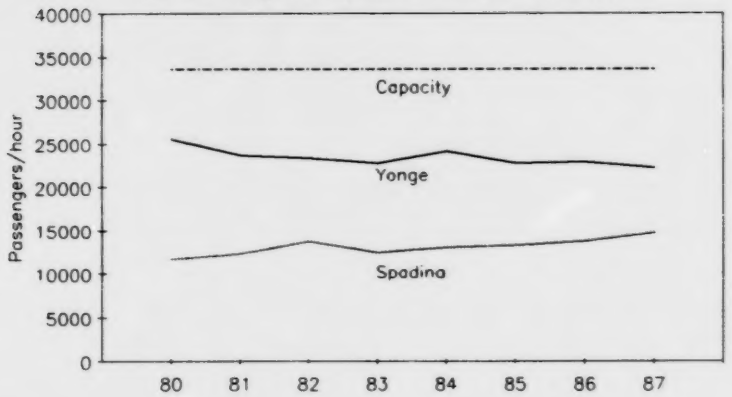
EXHIBIT 14: A.M. PEAK HOUR SUBWAY COUNTS, 1980-1987

(a) SB Yonge & University Lines S. of Bloor

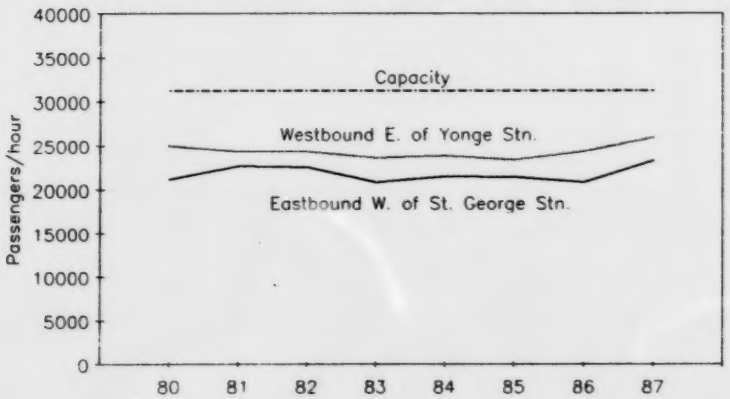


* Capacity based on existing (1987) service

(b) SB Yonge & Spadina Lines N. of Bloor



(c) Bloor Line W. of St. George & E. of Yonge



Source: T.T.C. (Average of monthly counts excluding June, July, August)

3.4.2 Peak Point Subway Counts

The T.T.C. takes monthly one-day subway ridership counts at key locations, and prepares annual summaries. In previous years, the average of the three highest monthly counts has been used, but as of 1987 the average of all monthly counts, excluding the summer months of June, July and August, has been adopted as being more representative of average ridership. Averages for previous years, back to 1980, have been recalculated. Thus, the peak point ridership figures presented in Exhibit 14 are somewhat lower than those in the previous C.A.M.P. report. Only a.m. peak hour ridership is shown, as this is consistently higher than the ridership in the p.m. peak hour.

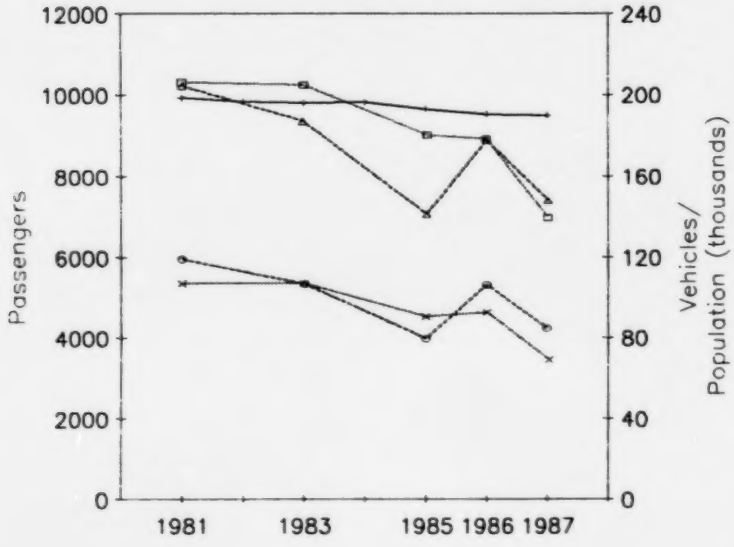
The peak year for Yonge line ridership south of Bloor station was 1981; the revised average count of 31,950 passengers per peak hour in 1981 is 5% below the theoretical "capacity" of 33,600, based on a loading standard of 1,200 per train and the existing (1987) frequency of 28 trains per hour. The previous figure based on the three highest monthly counts exceeded this value. Yonge line ridership has shown a gradual decline since 1981. University line ridership south of St. George station was level from 1980 to 1982, dipped slightly in 1983 and 1984, and has since recovered above the 1981 level. Between 1986 and 1987, the counts showed a decline on the Yonge line and a corresponding increase on the University line, such that the University line ridership of 23,350 reached 89% of the Yonge line ridership of 26,250. Some of this shift could be attributable to construction activities at the Bloor/Yonge station, causing some transfers to switch to St. George station. Combined ridership on the two lines south of Bloor Street was 49,600 in 1987, compared to 49,400 in 1986 and 53,950 in 1981. The 1987 Yonge line ridership was 78% of capacity, while on the University line it was 69.5% of capacity.

North of Bloor station, the Yonge line ridership has shown a slight but steady decline since 1980, except for a small increase in 1984. The Spadina line north of Spadina station, on the other hand, has shown a steady increase, except for a drop between 1982 and 1983. Combined peak hour ridership on both lines in 1987 was 36,850, compared to 37,050 in 1982, the previous peak year.

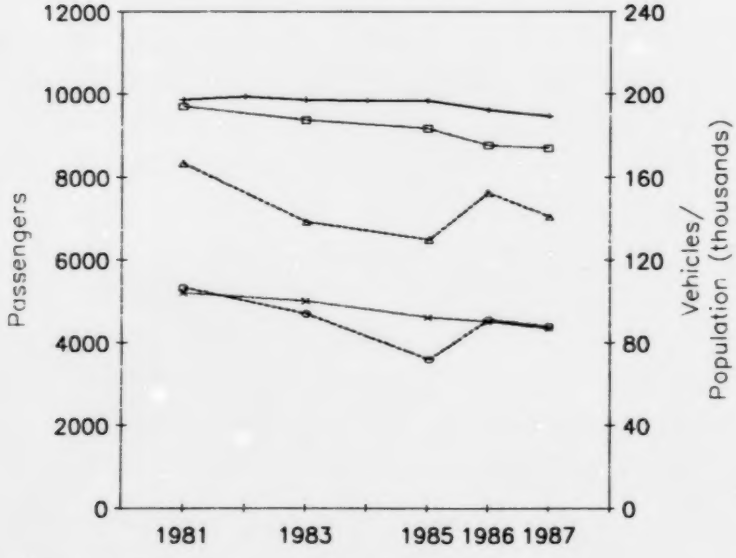
EXHIBIT 15: STREETCAR RIDERSHIP TRENDS AT CENTRAL AREA CORDON

A.M. Ridership, Vehicles and Catchment Area Population for Trips Into the Central Area

(a) From the West



(b) From the East



Source: Metro Cordon Count and Housing Data Base

Peak hour, peak direction counts taken on the Bloor-Danforth line between Spadina and St. George stations and between Sherbourne and Yonge stations show parallel trends between 1980 and 1987, with ridership from the west being slightly lower. Both recorded significant increases between 1986 and 1987, to levels slightly exceeding the previous maximums recorded in 1980 and 1981. The ridership east of Yonge in 1987 was 83% of the capacity of 31,200 persons per hour, based on the current (1987) frequency of 26 trains per hour, which was higher than the volume/capacity ratio on Yonge south of Bloor. West of St. George, 1987 ridership was at 75% of capacity.

The above analysis indicates that the *average* peak hour ridership is below the loading standard "capacity" on all lines; in practice, daily, monthly and hourly variations in ridership, coupled with uneven loading patterns and irregularities in service, result in overcrowding of trains, congestion on platforms and delays at stations on numerous occasions. Fifteen-minute counts frequently exceed the "capacity" when expressed on an hourly basis.

3.4.3 Surface Transit

The previous C.A.M.P. report summarized a.m. peak period streetcar ridership and vehicles entering the Central Area from the west and the east between 1981 and 1986, and compared it to population trends in Planning Districts 2 and 6, which approximate the ridership catchment areas to the west and east, respectively. Exhibit 15 includes updated information for 1987 from the Metro Cordon Count and the Housing Data Base. The exhibit shows 2-hour rather than 3-hour peaks as the data was more readily available, but this should not affect the conclusions. At the west screenline, it appears that the increase in ridership recorded between 1985 and 1986 has been counter-balanced by a decrease from 1986 to 1987. However, the drop has been accompanied by a corresponding drop in the number of vehicles in service, primarily on Dundas Street West; both numbers decreased by about 20%. From the east, where there was also a ridership increase between 1985 and 1986, a smaller decline in both ridership and vehicles from 1986 to 1987 has been recorded. (This analysis is based on one-day counts.) Planning Districts 2 and 6 each experienced slight population declines between 1986 and 1987, but smaller in percentage terms than the ridership decreases.

EXHIBIT 16:
TOTAL VEHICLE COUNTS AT SELECTED EXPRESSWAY LOCATIONS

(a) GARDINER EXPRESSWAY WEST OF BATHURST STREET

	EASTBOUND			WESTBOUND		
Year	Maximum Hour	7:00 a.m.-10:00 a.m.	6:30 a.m.-11:30 p.m.	Maximum Hour	3:30 p.m.-6:30 p.m.	6:30 a.m.-11:30 p.m.
1975	5,212	14,537	55,641	6,043	15,190	55,796
1977	5,171	14,922	57,631	5,685	16,130	58,596
1979	5,201	14,825	53,914	6,845	18,901	69,962
1981	5,211	14,386	61,918	5,210	14,994	62,434
1983	5,935	16,650	66,624	5,898	16,182	62,609
1985	5,713	16,003	69,137	5,853	16,777	68,595
1987	5,247	14,525	68,456	5,622	13,357	70,559

(b) DON VALLEY PARKWAY SOUTH OF EGLINTON AVENUE

	SOUTHBOUND			NORTHBOUND		
Year	Maximum Hour	6:30 a.m.-9:30 a.m.	6:30 a.m.-11:30 p.m.	Maximum Hour	3.30 p.m.-6:30 p.m.	6:30 a.m.-11:30 p.m.
1975	5,129	14,032	50,757	5,032	13,626	52,482
1977	5,120	14,325	56,838	4,756	13,832	54,449
1979	5,164	13,909	59,476	4,549	12,811	57,486
1981	4,866	13,685	56,877	5,457	14,588	55,687
1983	5,756	15,467	65,046	4,969	13,561	46,701
1985	5,257	14,469	51,790	5,043	14,334	60,587
1987	5,232	14,212	68,131	5,697	15,072	69,972

Source: Metro Cordon Count Program

3.4.4 Road System

The previous C.A.M.P. report presented background information on the road system and analyzed cordon counts at two key expressway locations. Other than the 1987 Metro Cordon Count, little new data is available for the road system.

One item of note is that the City and Metropolitan Toronto have moved to modify the periods for which rush hour restrictions on turning, stopping and parking apply, recognizing the growth in congestion outside of these periods. Starting with the Central Area in June, 1988, most restrictions will apply from 7:30 to 9:30 a.m. and from 3:30 to 6:30 p.m., rather than 7:00 to 9:00 a.m. and 4:00 to 6:00 p.m, as in the past. (On-street parking is not generally a problem before 7:30 a.m.) While this will help ease traffic flow for commuters, it reduces the amount of time available for on-street truck loading and unloading. Possible results of this move could be more competition for on-street loading space during the day, increased violations of the peak period restrictions, or a shift to evening or night deliveries. Effective enforcement of the new restrictions will be required to realize the full benefits to traffic movement.

Exhibit 16 presents cordon count data for two expressway locations on the fringe of the Central Area: the Gardiner Expressway at Bathurst Street, and the Don Valley Parkway south of the Eglinton Avenue interchange. The latter is the closest available count location to the Central Area; the Gardiner Expressway at the Don River would not be representative, as it has been subject to ongoing rehabilitation, reducing capacity and affecting traffic flow. The maximum three-hour morning peak period for the Don Valley Parkway count is 6:30 to 9:30 a.m., compared to 7:00 to 10:00 a.m. for the Gardiner Expressway count. There is no discernible growth trend in either the maximum hour or three-hour peak period counts. Detailed analysis of the one-hour, two-hour and three-hour peaks likewise shows no particular trend in hourly distribution, or evidence of "peak spreading". Traffic at the two locations is essentially at or close to maximum capacity (Level of Service "E" or sometimes "F") throughout the three-hour period. The all-day counts do, however, indicate a definite growth trend in mid-day and/or evening traffic. Peak period counts for the so-called "off-peak" direction have grown to a level close to or equal to those for the peak direction.

EXHIBIT 17: EXISTING GO TRAIN AND BUS SERVICES

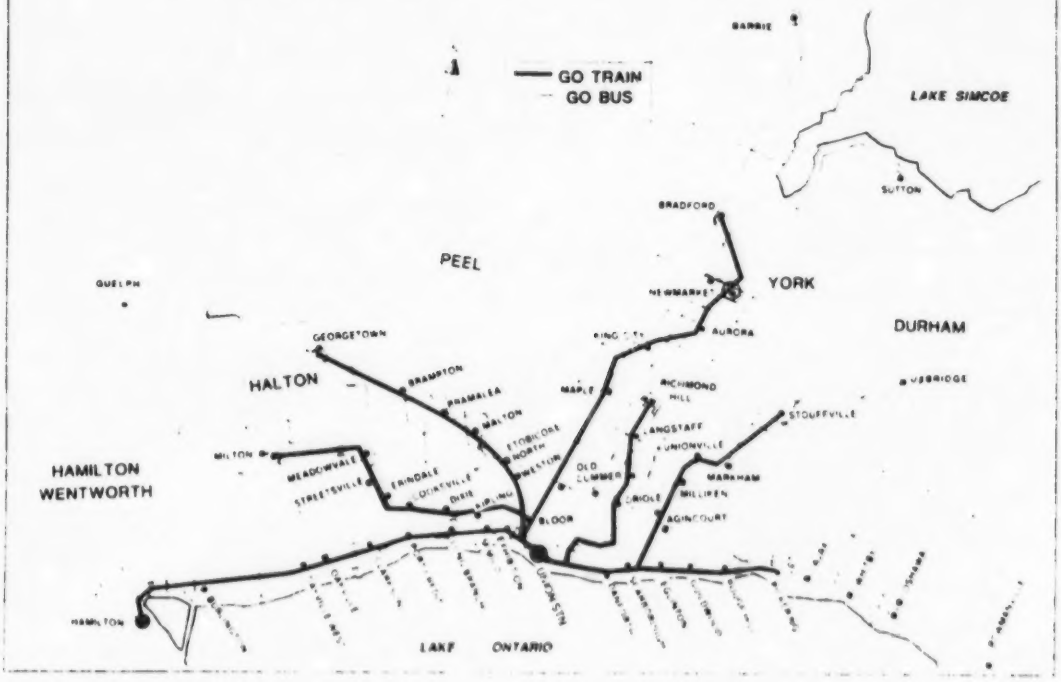
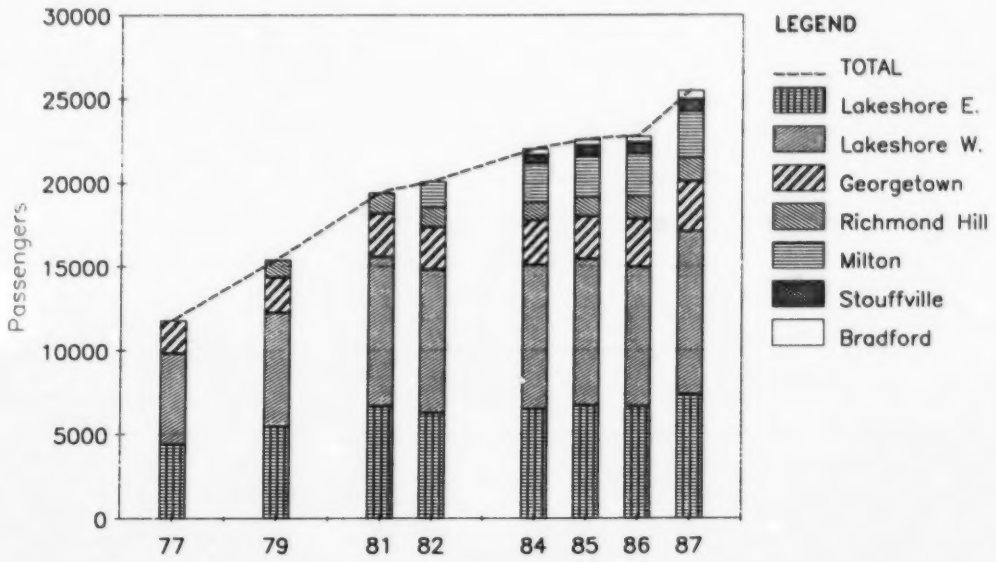


EXHIBIT 18: GO TRAIN PASSENGER ARRIVALS AT UNION STATION, 7:00-9:00 A.M.



Source: GO Transit data for Metro Cordon Count

3.4.5 GO Transit

Exhibit 17 shows existing GO Rail routes serving the Greater Toronto Area, which are focused on Union Station in the Central Area. Only the Lakeshore line provides full service; the remaining lines provide only peak period service, inbound in the morning and outbound in the afternoon. In the fall of 1986, two additional trains were added to the Lakeshore West line inbound in the a.m. peak, and one outbound in the p.m. peak; also, the number of trains extended from Oakville to Hamilton was increased from two to three in each peak period. Schedules on other lines remained the same in 1987 as in 1986. GO Bus routes act mainly as feeders to the rail lines and T.T.C. rapid transit stations; only the Hamilton Express bus route carries appreciable ridership into the Central Area, but compared to T.T.C. ridership, the impact is negligible.

Exhibit 18 charts the growth in passenger arrivals at Union Station by line since 1977, for the 7:00 to 9:00 a.m. peak period. As with the subway, ridership is higher in the a.m. than in the p.m. peak. Exhibit 19 tabulates 1986 and 1987 passengers, trains and seating capacity by line for both 7:00 to 9:00 a.m. and the maximum 1-hour period (calculated independently for each line). A three-hour peak for GO would show very little difference, since the majority of arrivals are concentrated in the two-hour period. The graph shows an increase of 11.9% in total two-hour arrivals between 1986 and 1987, primarily on the Lakeshore West line, which increased by 17.2% in the two-hour period and by 23.0% in the maximum hour. This indicates substantial latent demand in the Lakeshore West corridor, which was taken up by the two additional trains. The average load factor (passengers divided by seating capacity) on Lakeshore West in the peak hour was 95% in 1987 for 7 trains, up from 93% for 5 trains in 1986.

A peak hour increase of 11.0% on the Lakeshore East line between 1986 and 1987 resulted in an average load factor of 100%, compared to 90% in 1986. In practice, load factors over 90% mean substantial numbers of standing passengers. The remaining lines also experienced growth in ridership; 1987 load factors ranged between 77% and 82% of seating capacity.

EXHIBIT 19: A.M. PEAK HOUR AND PEAK PERIOD GO TRAIN PASSENGER ARRIVALS AT UNION STATION, 1986 AND 1987

(a) A.M. PEAK HOUR

	1986				1987			
Line	Trains	Seats	Passengers	% Load	Trains	Seats	Passengers	% Load
Lakeshore West	5	7,096	6,630	93%	7	8,550	8,150	95%
Lakeshore East	3	4,370	3,950	90%	3	4,370	4,390	100%
Georgetown	3	2,950	2,370	80%	3	2,950	2,420	82%
Richmond Hill	2	1,300	970	75%	2	1,300	1,050	81%
Milton	3	3,440	2,490	72%	3	3,440	2,720	79%
Bradford	1	650	380	58%	1	650	520	81%
Stouffville	1	970	680	70%	1	970	750	77%
TOTAL	**18**	**20,780**	**17,470**	**84%**	**20**	**22,230**	**20,000**	**90%**

(b) 7:00 to 9:00 A.M.

	1986				1987			
Line	Trains	Seats	Passengers	% Load	Trains	Seats	Passengers	% Load
Lakeshore West	7	9,690	8,320	86%	9	11,310	9,750	86%
Lakeshore East	6	7,610	6,670	84%	6	8,750	7,390	84%
Georgetown	4	3,760	2,870	76%	4	3,600	2,940	82%
Richmond Hill	3	1,940	1,370	70%	3	1,940	1,420	73%
Milton	3	3,440	2,490	72%	3	3,440	2,720	79%
Bradford	1	650	380	58%	1	650	520	81%
Stouffville	1	970	680	70%	1	970	750	77%
TOTAL	**25**	**28,064**	**22,791**	**81%**	**27**	**30,660**	**25,490**	**83%**

Source: GO Transit data for Metro Cordon Count Program

3.4.6 Peaking Characteristics

It has been observed in recent years that the twice-daily peak periods of congested road and transit travel appear to be getting longer. As mentioned earlier, this has been recognized in the move to modify the hours of peak period parking, stopping and turning restrictions, starting with the Central Area in June, 1988. It has been theorized that, as flows on transportation facilities reach capacity, more commuters choose, or are forced, to change their travel times to avoid the most congested periods, thus "spreading" the peaks. Efforts to use cordon count data to quantify the degree of peak spreading and to measure trends have met with some difficulty, since the year-to-year random variations in the counts can mask gradual trends. However, the comparison of the three-hour peak periods with the two-hour peaks used previously does provide some insight.

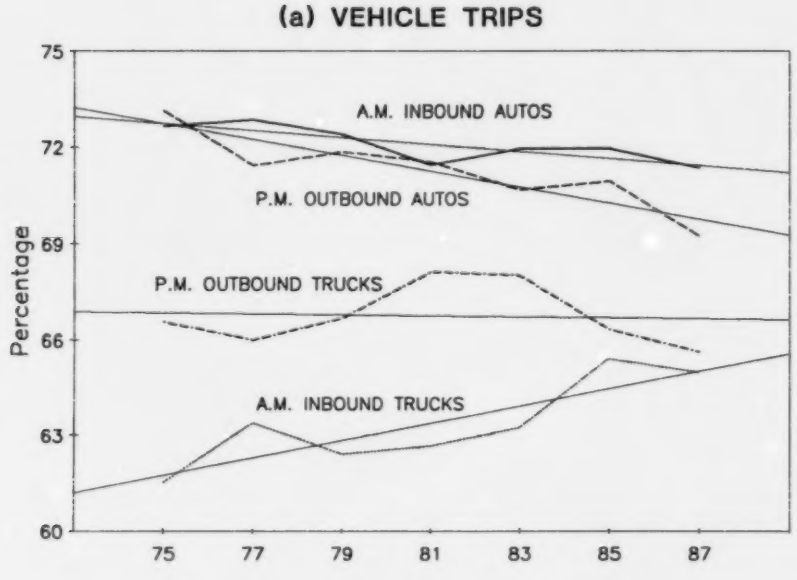
Exhibit 20 graphs, for vehicle and person flows across the Central Area Cordon, the ratio between the two-hour and the three-hour peaks. Relationships are plotted separately by mode, for the a.m. inbound and p.m. outbound peak periods, with linear trend lines superimposed. GO Rail flows are not included, since all trains, with the exception of those on the Lakeshore line, arrive and depart within the two-hour traditional peaks. A downward trend in the ratio between two-hour and three-hour peaks indicates a relative shift to the "fringe" of the peak period; where this is accompanied by growth in total travel, it implies a greater growth in the fringe, or a spreading of the peak.

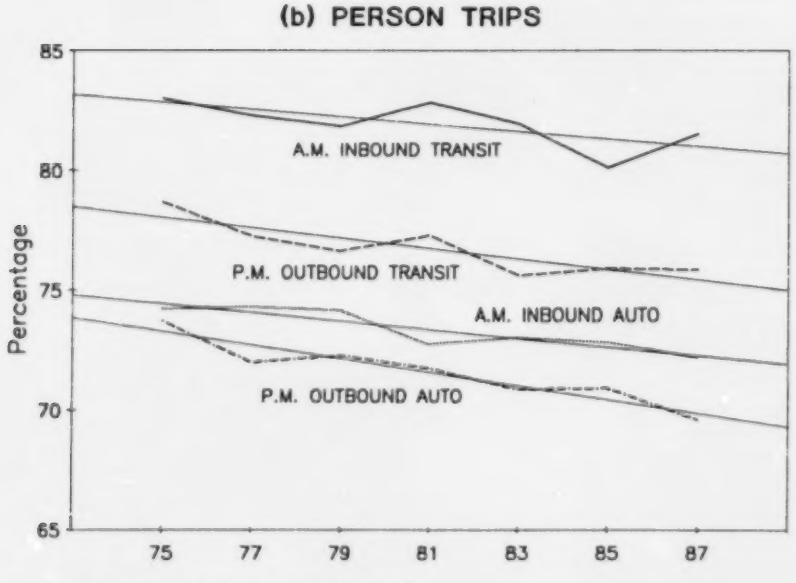
For person flows across the cordon, a slight but discernible downward trend is identified in the a.m. and p.m. peak periods, for both auto and transit passengers, indicating a growing proportion of travel in the fringes of the peaks. (The scale chosen for the graphs exaggerates the trends somewhat.) Transit travel is also more highly peaked, or concentrated in the two-hour period, than auto travel, and travel is more peaked in the a.m. than in the p.m. peak periods.

The trends for auto vehicle flows at the Central Area Cordon are quite similar to those for auto passengers. For truck traffic in the p.m. peak period, the trend line is level at about 67%, indicating an even distribution of trucks throughout the three-hour period. In the a.m. peak period, the percentage is less than 67%,

EXHIBIT 20: PEAKING TRENDS AT THE CENTRAL AREA CORDON

(TWO-HOUR AS A PERCENTAGE OF THE THREE-HOUR PEAK PERIOD)





Source: Metro Cordon Count Program

indicating relatively more travel in the fringe of the peak period; however, the trend line is positive, indicating that more growth is occuring in the two-hour peak than in the fringe, which is opposite to the trend for auto traffic.

Analysis of data for the Downtown and Downtown Core Cordons does not show the same picture. Auto and transit person travel in the three-hour peaks has been relatively stable in recent years, as has the distribution of travel within the peak periods, so that no specific trends in peak spreading can be identified.

Exhibit 21 casts additional light on the peak spreading phenomenon. It shows peak period, peak direction counts at the Central Area Cordon by 15-minute period within the three-hour peak periods for 1987, in comparison with 1977 (chosen as a representative year to illustrate the changes). The 7:00 to 9:00 a.m. and 4:00 to 6:00 p.m. periods are indicated by vertical lines.

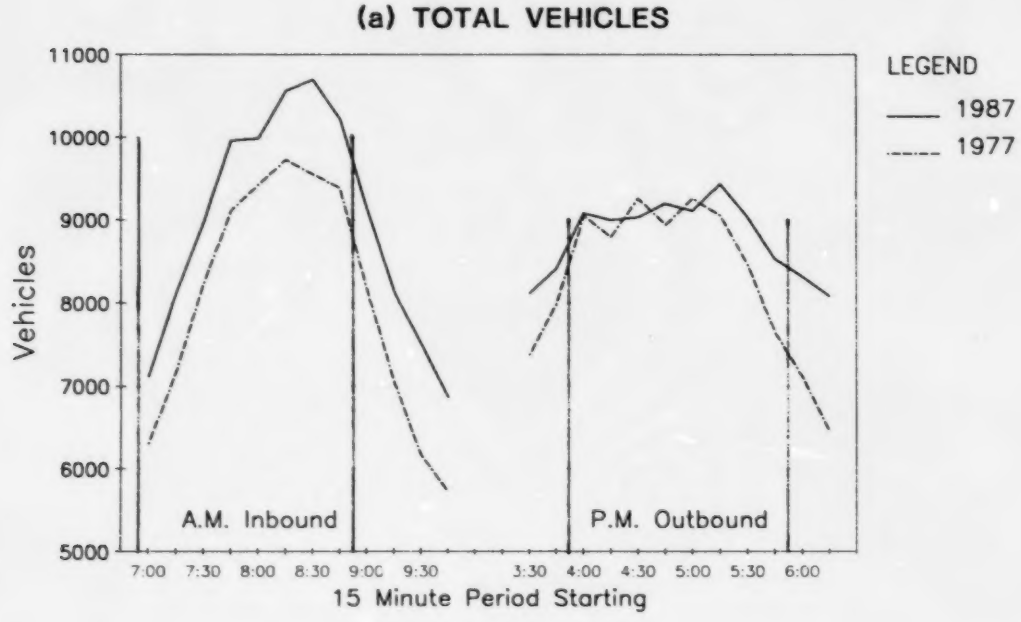
The first graph, for total vehicles, shows that, in the a.m. peak period, growth has occurred both within the 7:00 to 9:00 period and in the fringe (9:00 to 10:00); the previous graph in Exhibit 20 confirmed the trend towards greater growth in the fringe. In the p.m. peak period, essentially no growth has occurred between approximately 4:00 and 5:30 (presumably due to capacity bottlenecks on roads leaving the Central Area), but substantial growth has occurred between 5:30 and 6:30, and to a lesser extent between 3:30 and 4:00 p.m.

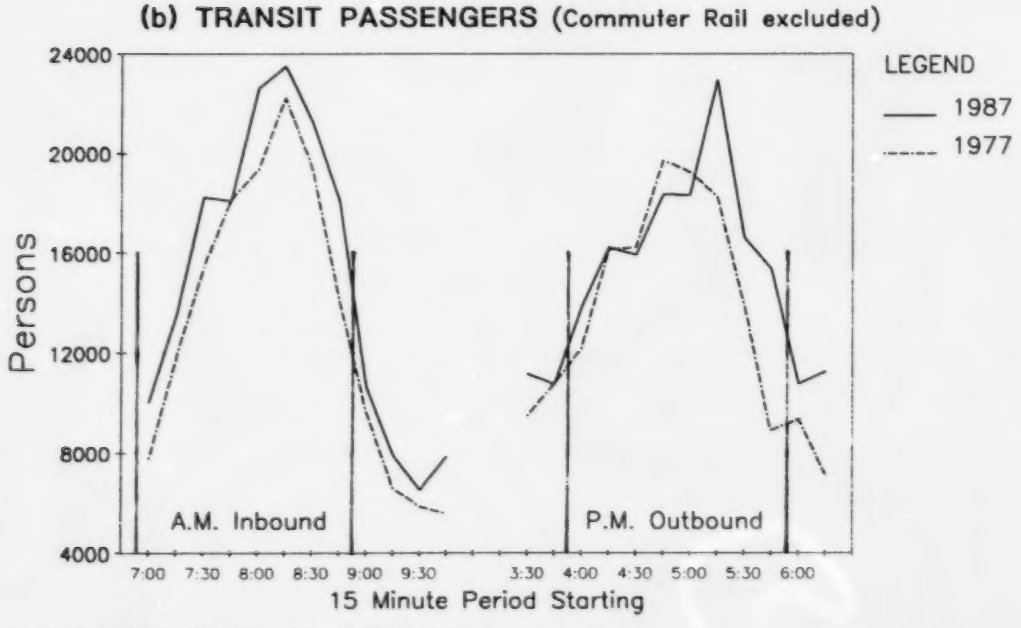
The second graph, for transit passengers (excluding GO Rail, which would distort the picture), shows a similar relationship, with growth throughout the a.m. peak period, and growth in the p.m. period mainly after 5:00 p.m. (The sharp peak for the period representing 5:15 to 5:30 in 1987 may be an anomaly.)

In terms of the length of the peak periods, it can be seen from Figure 21 that the time over which the volume exceeds a given level has consistently increased.

In summary, there has been a slight but discernible trend toward peak spreading in both auto and transit person travel between 1975 and 1987 at the Central Area Cordon, but no specific trendscan be identified at the innermost cordons.

EXHIBIT 21: PEAK PERIOD COUNTS BY 15-MINUTE PERIOD AT CENTRAL AREA CORDON





Source: Metro Cordon Count Program

3.4.7 Through Travel

It is not possible to make direct comparisons between counts of travel entering a cordon and demographic characteristics of the area within the cordon, since a proportion of the travel recorded is passing through the cordon, and the amount of the through travel cannot be determined directly. In particular, the Gardiner Expressway and the Bloor-Danforth Subway, which both pass east-west through the Central Area Cordon, carry a significant proportion of through traffic. If the through travel is decreasing, for instance, while the travel destined within the cordon is increasing, this may not be evident from the counts.

For the Gardiner Expressway, the Metropolitan Roads and Traffic Department collects regular automatic counts on all ramps entering and exiting the Expressway within the Central Area. Following a balancing procedure, maps are prepared summarizing peak hour and total daily vehicle flows on each ramp and section of expressway, which allow identification of the amount of through travel. Analysis of this data shows that the proportion of through travel is lower in the peaks than on an all-day basis, but large fluctuations from year to year do not permit identification of any long-term trends. Eastbound through travel at the Bathurst screenline ranges from 15 to 25% in the a.m. peak hour and from 25 to 35% for all day; at the Don River screenline, westbound through travel ranges from 30 to 45% in the peak and from 40 to 50% for all day. Attempts to analyze through travel between the Gardiner Expressway at Bathurst Street and the Don Valley Parkway north of Bloor Street were complicated by the effect of traffic both entering and exiting the expressway between the two locations

For the subway, the only comprehensive source of data is the T.T.C. Subway Station Origin-Destination Survey, which was last conducted in 1978. The report from that survey includes analysis of the destination stations of trips entering the downtown area in the a.m. peak period, and the origin stations of trips leaving in the p.m. peak period. The area is somewhat smaller than the Central Area, but the same general conclusions apply. For a.m. peak trips entering Spadina station from the west, or Yonge station from the east, approximately 70% are destined to stations within the downtown area, and 30% travel through to stations beyond.

For trips approaching Bloor Street from the north on the Yonge or Spadina lines, roughly 10% are destined to the Bloor line east or west of the area. Overall, an average of 20% of total subway passengers entering the Central Area travel through. Similar proportions apply to outbound travel in the p.m. peak.

A repeat of this survey to determine whether the proportion of through travel has changed significantly would be labour-intensive and relatively costly. The T.T.C. Service Planning Department has developed computer techniques for detailed simulation of transit ridership from travel surveys; this could provide an alternative, lower cost means of updating the estimates of through travel, and will be investigated for the next C.A.M.P. annual report.

3.5 Part-Time Employees' Survey

In conjunction with the 1987 Employment Survey, Metropolitan Planning Department staff distributed a special questionnaire to approximately 20% of all part-time workers in the Central Area. As indicated in Section 3.1, part-time accounted for 11.5% of total employment within the Central Area Cordon in 1987, compared to 8.2% in 1983. The number of part-time employees increased by 61% over the same period. The purpose of the survey was to determine the travel habits of part-time workers in comparison to full-time, and hence to assess the effects of increasing part-time employment on peak period travel demand.

Some major employers in the Central Area declined to participate in the survey, and of the approximately 10,000 survey forms distributed, only 1,482 valid responses were received. These represented a 15% response rate, or 3.1% of total part-time employment in the Central Area. A summary of the major findings follows, but they should be viewed with some caution since the low response rate could result in a bias.

- Over 75% of part-time workers are female; approximately 90% of both male and female work part-time by choice, not because of lack of full-time work.
- Part-time Central Area workers are highly dependent on T.T.C. for work travel; 71% of respondents used T.T.C., 12% travelled by auto, 9% walked, 5% used GO and 3% used other means.

- 33% of part-time workers started work between 7:00 and 9:00 a.m., 39% between 9:01 a.m. and 3:59 p.m., 23% between 4:00 and 6:00 p.m., and 5% between 6:01 p.m. and 6:59 a.m.
- 20% finished work between 9:01 a.m. and 3:59 p.m., 42% between 4:00 and 6:00 p.m., 34% between 6:00 p.m. and midnight, and 4% between 12:01 a.m. and 9:00 a.m.
- 88% worked on Fridays; percentages for other days were: Wednesday and Thursday 82%, Monday 77%, Tuesday 76%, Saturday 52%, Sunday 17%.
- 19% of respondents were under 20, 39% were 20 to 29, 19% 30-39 and 23% over 40 years of age.
- 50% of respondents lived within the City of Toronto, 39% in the rest of Metro and only 9% outside Metropolitan Toronto.

It can be inferred from the survey results that part-time employees, as compared to full-time, tend to: work more mid-day and evening shifts; travel more by transit; live closer to work; and be young and/or female. A large proportion of part-time employment is in the retail and service sectors (including restaurants, entertainment etc.) which operate evenings and Saturdays.

Without a simultaneous survey of travel habits of full-time employees, it is difficult to quantify the relative effects on peak period travel. Limited travel surveys of Central Area employees were undertaken in 1976 and 1980; the results of the Transportation Tomorrow Survey, when available, should give an improved picture of Central Area travel. Given the low response rate to the part-time survey and the lack of funds to conduct a more comprehensive survey, it was decided not to repeat the exercise in 1988, but the option should be kept open to repeat it in the future.

3.6 Central Area Residents' Survey

A sample survey of Central Area residents was conducted on behalf of the City of Toronto Planning and Development Department in 1986, to determine characteristics of work location and travel mode. The following is a summary of the major findings, including comparisons with a previous survey undertaken in 1981.

- In the summer months, 38.0% of Central Area residents walk to work within the Central Area on a regular basis, compared to 32.4% in winter; corresponding proportions in 1981 were 35.9% and 30.7%.
- For residents of the Core Area (between University Avenue and Jarvis Street), walk-to-work proportions are higher, at 50.2% in summer and 42.6% in winter, compared to 43.5% and 36.6% in 1981.
- Expressed as a percentage of full-time employment in the Central Area, regular walkers account for 8.3% in summer and 7.1% in winter (up from 7.0% and 6.0% in 1981).
- The average walk time has increased substantially, from 12.3 minutes in 1981 to 21.8 minutes in 1986. A number of respondents indicated that they walked primarily for fitness reasons.
- 52.0% of Central Area residents work in the Core (up from 46.9%).
- 66% of respondents were tenants, 82% worked in offices and 21% listed their occupation as Managerial/Administrative.

A total of 3,400 people were surveyed, resulting in 605 usable responses for an effective response rate of 17.8%. This low rate could result in a non-response bias, since non-respondents may have different characteristics from those who responded.

In general, it appears that recent residential growth in the Central Area, ranging from assisted and non-profit housing to medium and high-priced condominiums, has been accompanied by an increase of roughly 20% in the proportion of Central Area employees who walk to work. An increase in walk trips has a favourable impact on road and transit congestion, and continued downtown residential development will help offset the need for additional transportation capacity, although in terms of total commuter travel, its effect will be relatively small. The Downtown Employment Study (see next section) favours active encouragement of further poulation growth in the Central Area, and documents an exercise to quantify the benefits of investment in residential development in terms of its impact on the need for transportation expenditures.

3.7 Downtown Employment Study

The Downtown Employment Study was initiated by City of Toronto Executive Committee following conclusion of the 1986 Quinquennial Review, and in response to concerns expressed by Councillors Gilbert and Layton regarding future office employment and development trends in the Central Area, particularly the impact of technological changes on employment and floor space forecasting. A Steering Committee was set up including political and business representatives, and a series of sub-studies was approved by City Council.

Sub-Study 1: "Outlook for Office Employment and Office Space in the Central Core" was undertaken by Hemson Consultants Limited, and the main findings were summarized in the previous C.A.M.P. report. Hemson projected that employment in the Central Core (roughly the Downtown plus Extended Core Cordons) would rise by approximately 2% per year from 1986 to 1991, average net FSW would increase slightly from 21.5 to 22.1 square metres per worker over the same period, and demand for new office space would average about 120,000 square metres per year.

Sub-Study 2: "Employment Impacts of Technological Change in the City of Toronto" was undertaken by Donovan F. Pinker Consultants. The study involved surveys of firms in the Central Area, focusing on their office technology needs, and on employment and the impacts of technology. A second phase addressed the concept of the "smart" building, and reviewed examples in other world cities. The study found that: new office technologies are in widespread use in Toronto, and utilization can be expected to increase over the next five years; a large proportion of firms already use Local and Wide Area Networks; and the globalization of business, especially in the Financial and Business Services sectors which predominate in the Central Area, increases the importance of integrating telecommunications technologies and the concept of the smart building.

Sub-Study 3: "Financing Office Development" was undertaken by Royal LePage Limited, and addressed the concern that institutional investors of pension and life insurance funds invest "patient money" in new office buildings, accepting

lower rates of return over a longer pay-back period, thus contributing to high vacancy rates and an oversupply of office space. Based on interviews with so-called "patient money" investors, the study concluded that the phenomenon was overstated, and that institutional investors do not make speculative investments in soft real estate markets.

Sub-Study 4: "A Comparative Study of Downtown Office Sectors" was undertaken by City of Toronto Planning and Development Department staff, and involved comparison of office market indicators for the Toronto Region with four other Canadian and eight U.S. major metropolitan areas, for the period 1980 to 1985. The Toronto Region had the seventh largest inventory of office space of the cities surveyed, and the third most downtown-oriented office market. Average vacancy rate in the Region from 1980 to 1985 was 9%; only New York City had a lower vacancy rate.

"Downtown Employment Study - Final Report", prepared by Planning and Development Department staff, is scheduled for publication in June, 1988. It synthesizes the sub-study findings, and updates some of the analyses undertaken for the Quinquennial Review, comparing trends in employment, office space and observed travel data. It concludes that the surge in office leasing in the Central Area in 1987 was probably related to financial deregulation and an influx of foreign money, and is unlikely to continue at the same rate; the vacancy rate could rise again as new developments come on the market. The cyclical pattern of growth in the Business services and Financial sectors and their dependence on global financial trends make the forecasting of office requirements very uncertain. The report refers to the implications of the requirements of smart buildings (larger floor plates, greater floor heights, etc.) on building codes, zoning by-laws and building appearance. It compares the City of Toronto Official Plan to the City of London (England) Local Plan which actively encourages development of smart office buildings. The report concludes with recommendations for further studies on the implications of office technology, and on maintaining the balance between enhancing the City's position as a world class financial centre and keeping it an attractive and affordable place for people to live and work, with emphasis on encouraging population growth in the City.

3.7 Development and Transportation Proposals for the Central Area

3.7.1 Current Development Proposals

Exhibit 22, compiled by the Research Division of the Metropolitan Planning Department from City of Toronto data, lists the major Central Area office developments under construction and at various approval stages as of January, 1988. The table lists net new office floor area (excluding space in previously existing buildings), and estimated additional office employment based on an assumed marginal floor space per worker of 28.0 square metres. This is slightly higher than the average for existing buildings; a higher FSW was assumed for the CBC Headquarters proposal to account for studio space. The table lists 394,000 square metres of office space under construction, 70% of which is accounted for by Scotia Plaza and BCE Place (Phase 1). A total of 1,302,400 square metres of office space are listed as having received City Council approval, or being at various stages of the approval process. The above figures do not include the Railway Lands, for which a total of 1,108,800 square metres of office space have been approved. Other than Precinct A, which was released to permit construction of the SkyDome, development is subject to a Holding Designation; no office construction is as yet underway.

Including the Railway Lands, over 2,800,000 square metres of new office space are committed or have been actively proposed in the Central Area, representing a potential 100,000 office employees. The rate of completion of new office space is subject to economic cycles and other factors, while the number of employees indicated does not necessarily represent the net gain to the Central Area; some may transfer from older buildings, and there could be decreases in other sectors. While vacancy rates at the end of 1987 were low, completion of those developments now under construction over the next 2 to 3 years may result in a return to higher vacancy rates. As reported in the Downtown Employment Study, absorption of new office space is not expected to maintain the high rate observed in 1987. An average vacancy rate of 6 or 8% is considered acceptable by the business community, and compares favourably with rates in other major North American cities. The scale of the developments proposed has significant implications to the requirements for additional transportation capacity serving the Central Area, and emphasizes the necessity for coordination between development and transportation improvements.

EXHIBIT 22

MAJOR OFFICE DEVELOPMENTS UNDER CONSTRUCTION OR IN APPROVAL STAGES AS OF JANUARY, 1988

	Office Floor Area(sq.m.)	Est. Office Employment (1)
Under Construction		
320 Front Street West	20,500	730
175 Bloor Street East - Phase 1	29,400	1,050
Metro Police Headquarters	28,800	1,030
325 Front Street West	38,200	1,360
BCE Place - Phase 1	121,300	4,330
Scotia Plaza	155,800	5,570
Sub-Total	**394,000**	**14,070**
City Council Approval		
90/100 Yonge Street	14,500	520
434, 444, 454 University Avenue	24,500	880
1 Toronto Street	30,200	1,080
Waterpark Place - Phase 2	31,400	1,120
Toronto Stock Exchange	46,300	1,650
BCE Place - Phase 2	118,100	4,220
World Trade Centre	150,100	5,360
Sub-Total	**415,100**	**14,830**
Active Proposals		
31 Bloor Street East	25,400	910
Yonge & Richmond Streets	28,700	1,020
Yonge & Queen Streets	31,100	1,110
Confederation Square - Phase 2	38,400	1,370
College Park - Phase 3	46,100	1,650
95 Yonge Street	54,500	1,940
Metro Hall/Marathon West	109,600	3,910
Eaton Centre - Phase 2	138,600	4,950
Markborough Properties	146,300	5,230
CBC Headquarters	268,600	8,800 (2)
Sub-Total	**887,300**	**30,890**
Railway Lands		
Precinct A (approved)	164,300	5,870
Balance (under holding designation)	944,500	33,730
Sub-Total	**1,108,800** (3)	**39,600**
GRAND TOTAL	**2,805,200**	**99,390**

Notes: (1) Based on an assumed FSW of 28.0 sq.m. per worker
(2) A higher FSW used to account for studio space
(3) Total floor area approved under OPA 133 and By-law 612-85

Source: Metro Planning Department, Research Division

3.7.2 Current Transportation Proposals

As reported in the previous C.A.M.P. report, a number of transportation proposals are under active consideration, which would increase capacity or improve the flow of person and/or vehicle movements to, from or within the Central Area. The following is a summary of the current status:

(a) Road Proposals

Front Street Extension: a recommendation to Metro Council is expected to be made later in 1988 to approve the extension of Front Street from Bathurst Street to connect with the Gardiner Expressway.

Gardiner Expressway widening: detailed feasibility studies are underway; a report to Metro Council on the rebuilding of the Humber River bridge and South Kingsway interchange is expected in June, 1988, and a report on widening the roadway from 6 to 8 lanes between the Humber and Strachan Avenue will follow at a later date.

Leslie Street Extension: the extension of Leslie Street southward from Eglinton Avenue to connect with the Bayview Avenue Extension, together with widening of Bayview to Bloor Street and reconfiguration of the Bloor/Bayview interchange, was approved by Metropolitan Council in April, 1988. A public hearing before the Metropolitan Economic Development and Planning Committee on the necessary Official Plan Amendment is scheduled for June 22, 1988.

One-way Proposals: Various one-way schemes to improve traffic flow in the Central Area have been suggested. A three month trial project to make Yonge Street one way northbound and Bay Street one way southbound was initiated by the Mayor of the City of Toronto, but as of the time of writing had yet to receive final approval from City and Metro Councils. This proposal would create some disruption to the Bay Street bus service, which acts as an alternative route to the Yonge subway line. It would either require a contra-flow lane on Bay Street, thereby reducing the existing southbound capacity for vehicular traffic, or the Bay trolley coaches would have to be replaced by diesel buses if the northbound service were to run on Yonge Street. Another suggestion related to the Front Street extension, the Gardiner Expressway widening and

development of the Railway Lands would make Front Street one way eastbound from east of Spadina Avenue to Yonge Street. The one-way section of Wellington Street, currently westbound from Church Street to Simcoe Street, would be extended west of John Street, possibly with a new section of road connecting to Front Street east of Spadina Avenue. This proposal would not have a major impact on transit service, and would help compensate for the present imbalance of east-west capacity south of King Street.

(b) Transit Proposals

Harbourfront L.R.T. Construction commenced on this line, from Union Station via Bay Street and Queens Quay to Spadina Avenue, in October, 1987. Completion is scheduled for the end of 1989. Various proposals to extend the line westerly to serve Exhibition Place and/or Ontario Place are currently under consideration.

Spadina Transit: This proposal, for improved transit along Spadina Avenue from Bloor Street to Queens Quay, connecting with the Harbourfront line, has been the subject of ongoing studies. A comprehensive alternatives analysis has recently been completed, and authority is presently being sought to approve a Spadina Avenue L.R.T. service in principle and to undertake the studies necessary to complete the environmental assessment.

Subway Improvements: The T.T.C. has completed the first phase of an $11.44 million improvement program at the Bloor/Yonge station, involving removal of wall sections to improve pedestrian flow between the Yonge platforms and mezzanine. Further improvements will include widening of the Yonge line platforms and construction of additional street entrances. Studies are also underway into means of reducing the Yonge line peak period headway from its present level of 2 minutes, 7 seconds. Any substantial reduction would require an upgraded signalling system and major modifications to the Finch terminal station and to the Bloor/Yonge station; these two locations are the exisiting bottlenecks on the system. The Ontario Minister of Transportation's announcement of May 24, 1988, made reference to Provincial support for an expenditure of up to $100 million on this project.

(c) GO Rail

The Province is committed to incremental upgrading and expansion of existing GO commuter rail services. In addition to the service improvements introduced on the Lakeshore West line in October, 1986, within the next year the Milton line service will be increased from 3 to 5 trains in each peak period, and full Lakeshore service will be extended from Pickering to Whitby. Additional trains will also operate to Burlington, including a new station at Appleby Line, with full service contemplated within 5 years. For the longer term, extension of full service to Hamilton and Oshawa is under active study. The May 24, 1988 Minister's announcement also proposed as "initiatives" upgrading of the Richmond Hill and Stouffville lines.

(d) GO/T.T.C. Fare and Service Integration

Several municipal transit systems in the surrounding Regions offer fare and/or service integration with GO train and bus services. As a result of Provincial studies, a demonstration project was implemented in Metro in February, 1988, whereby a combined GO and T.T.C. monthly pass can be purchased at a savings of $20.00. Initial sales of the pass have exceeded projections. The Province is committed to further integration of regional and local transit services in the Greater Toronto Area.

4 SUMMARY AND CONCLUSIONS

4.1 Synopsis of Findings

Based on results of the Metro Employment Survey, total employment within the Central Area continued to follow the growth trend observed since 1983, with a significant increase of 18,250 or 5.1% between 1986 and 1987. However, part-time employment showed a slight decline overall. This may be due in part to conversion of part-time to full-time jobs as a result of the healthy economy. Total employment in the Office sector grew by 6.0%, and it represented 62.4% of total Central Area employment in 1987. Part-time employment grew slightly in the Office sector, especially within the Downtown Core. Service sector employment showed strong growth within the Extended Core Cordon, including the Downtown Core and the Harbourfront area.

Population in the Central Area showed an increase of 2,950 or 2.3% between 1986 and 1987, about half of the increase occurring in the area bounded by University Avenue, Davenport Road, Jarvis Street and Dundas Street. New residential developments in the Harbourfront area should contribute to further population increases in the south part of the Central Area. A survey indicated that the proportion of Central Area employees walking to work had increased by roughly 20% between 1981 and 1986, from 7.0 to 8.3% in summer and from 6.0 to 7.1% in winter.

Office vacancy rates fell substantially during 1987, as a result of employment growth with comparatively little new office space coming on the market. At the same time, rental rates for new space increased. The surge in employment and office space absorption may be due in part to financial deregulation and an influx of foreign investment. In general, the employment and office space statistics reflect a buoyant economy; however, it is unlikely that the pace of growth in 1987 will be maintained, and the completion of major new office developments such as Scotia Plaza and BCE Place may well result in a return to higher vacancy rates. An average vacancy rate of 6 to 8% is considered normal

by the business community; this compares favourably with rates in other North American cities.

Cordon count comparisons were made on the basis of three-hour peak periods instead of the two-hour peaks used in previous reports. The number of autos counted entering the Central Area between 7:00 and 10:00 a.m. continued an upward trend apparent since 1981; however, the outbound counts between 3:30 and 6:30 p.m. showed a drop between 1985 and 1987. Auto passengers did not show a corresponding increase in the a.m. peak, since average auto occupancy continued to decline. Transit passengers showed a moderate increase in the a.m and p.m. peaks, while GO Train ridership continued to increase, especially on the Lakeshore West line where additional trains were introduced in the fall of 1986. At the Downtown and Downtown Core Cordons, no additional information was available for 1987, since these are only counted every second year.

There does not appear to be a direct correlation between cordon count trends and employment statistics; however, the cordon counts also include through trips and non-work trips, and peak period counts do not reflect growth at other times of the day, e.g. related to persons working part-time or staggered hours. Also, since cordon counts are taken in May/June, they would not reflect the full impact of employment changes measured from January to December.

T.T.C. subway peak point counts indicated a shift from the Yonge to the Spadina-University line in the a.m. peak hour between 1986 and 1987, possibly related in part to construction activities at the Bloor/Yonge station. The combined a.m. peak hour southbound ridership on the two lines both north and south of Bloor Street showed little change. However, counts of inbound ridership to the Central Area on the Bloor-Danforth line from both the east and the west indicated an increase.

Counts of streetcar riders entering the Central Area showed a decline in 1987, after an increase recorded in 1986, particularly from the west where there was also a substantial reduction in vehicles in service, particularly on Dundas Street.

Analysis of peaking characteristics suggested that, at the Central Area Cordon, there has been a slight but discernible trend in peak spreading, i.e. more growth in the fringe of the three-hour peak period than within the traditional two-hour peaks. At the inner (Downtown and Downtown Core) Cordons, the situation appears to be relatively stable, since there has been little or no overall growth trend in the three-hour periods and the volumes are spread almost evenly within the three-hour periods.

Analysis of the amount of travel entering the Central Area Cordon on both the Gardiner Expressway and the Bloor-Danforth subway indicated that, on average, roughly 30% of peak period trips are destined to points beyond the cordon. However, the data available do not permit identification of any trends over time in the proportion of through travel.

A limited survey of part-time employees in the Central Area indicated generally that, in relation to full-time workers, they tended to work more mid-day and evening shifts, live closer to work and travel more by T.T.C. The average age was lower, and the proportion of females was higher than for the work force as a whole. The response rate for the survey was low, and corresponding information for full-time workers was not collected at the same time, thus limiting the usefulness of the data. However, it can be concluded that an increase in the number of part-time workers would have less of an impact on peak period travel than a corresponding increase in full-time employment.

A review of major office developments in the Central Area indicated that the amount of new space both under construction and in various stages of the approval process showed a substantial increase during 1987. Including Railway Lands development approved under the Official Plan, approximately 2.8 million square metres of new Central Area office space are under construction, or have been approved or submitted for approval. This represents a potential 100,000 office employees, although this does not necessarily represent the net increase in total Central Area employment. Factors such as the cyclic nature of growth in the business and financial sectors, the effects of global economic trends and the

increasing demands of new technology make the accurate forecasting of employment and floor space subject to uncertainty.

Of the proposed transportation improvements affecting the Central Area listed in the previous C.A.M.P. report, construction of the Harboufront L.R.T. is underway, and the Leslie Street Extension has been approved by Metropolitan Council, subject to passage of an Official Plan Amendment. The Front Street Extension and Gardiner Expressway widening are the subject of detailed feasibility studies; the first phase will be reconstruction of the Humber River bridges. An alternatives analysis of the Spadina Transit project has been completed and approval in principle is being sought for an L.R.T. service on Spadina Avenue. T.T.C. is in the process of making improvements to the Bloor/Yonge station, and the Province has indicated support for a project to reduce peak period headways on the Yonge subway line. Committed GO Rail improvements include extension of full service to Whitby and Burlington on the Lakeshore line and service improvement on the Milton line; longer term proposals include full service to Hamilton and Oshawa, and expansion of service on the Richmond Hill and Stouffville lines. The Province is committed to fare and surface integration between GO and municipal transit services, and the experimental T.T.C./GO joint monthly pass project is to be expanded.

4.2 The Central Area Monitoring Program for 1988

Monitoring activities for 1988, which will be reported on in 1989, are summarized below.

The main addition to the Program for 1988 is a Speed and Delay Study on the major arterial streets within the Central Area. This involves making multiple runs in a specially-equipped car during the a.m. peak, mid-day and p.m. peak periods; an electronic recorder measures elapsed time and distance, while the operator identifies all stops and delays for traffic signals, congestion, etc. The information is subsequently transferred to a microcomputer for processing and analysis. The summarized data on average travel speed and delay for each section of road will supplement the volume data from the Cordon Count program, and give a more complete picture of the performance of the road

system. This study involves staff and equipment from Metropolitan Toronto, the City of Toronto and T.T.C. The program runs from early May to mid-June. If the Bay/Yonge one-way experiment is implemented in 1988, the study may be repeated in the fall by the Metropolitan Roads and Traffic Department to give a before-and-after picture for the affected streets.

The Metro Employment Survey will be repeated in 1988, with complete coverage in the Central Area. A 50% subsidy of the additional cost was supplied by the Ministry of Transportation in 1986 and 1987. Alternative funding through the Ministry of Municipal Affairs is being sought for 1988 and 1989.

The City of Toronto Public Works Department is conducting its regular cordon counts at the Downtown, Downtown Core and Extended Core Cordons during May and June, and T.T.C. staff will count the Central Area Cordon, as in 1986. The next full Metro-wide count program will be in 1989.

Work is currently proceeding on coding of the 1986 Census place-of-work data for Metropolitan Toronto, and on the analysis of data from the Transportation Tomorrow Survey which was conducted in 1986 throughout the Greater Toronto Area. It is expected that next year's C.A.M.P. report will include summary data from these projects as they relate to the Central Area, as well as information from the Speed and Delay Study and updates of the employment, population, office space and cordon count statistics.

4.3 Proposed Future Improvements to the Program

As mentioned earlier, the travel survey of part-time employees conducted in conjunction with the 1987 Metro Employment Survey in the Central Area provided data of limited usefulness due to the low reponse rate and the lack of participation by some major employers. It would be desirable to have reliable information on the travel characteristics of part-time workers in relation to those of full-time workers, to better assess the impact of changing proportions of part-time workers on peak period travel demand. This would require a more comprehensive (and costly) survey, with suitable follow-up procedures to

maximize participation and response. It is recommended that such a survey be considered for inclusion in the Central Area Monitoring Program in 1989.

It is also recommended that the Speed and Delay Study be repeated on a regular basis to identify trends, for example every two years. This should, therefore, be considered for inclusion in the 1990 program.

As suggested in the previous C.A.M.P. report, an analysis of volume/capacity ratios on individual roads in the Central Area would further supplement the cordon counts and the speed and delay data as measures of road system performance, and should be included in future reports. Further analysis of peak spreading and through travel at the Central Area Cordon will also be carried out.

APPENDIX

LAND USE AND CORDON COUNT TABLES

EXHIBIT A.1: EMPLOYMENT BY TYPE, 4 CORDONS

	FULL-TIME EMPLOYMENT							TOTAL EMPLOYMENT						
	OFFICE	MAN+W	INSTIT	RETAIL	SERVCE	OTHER	TOTAL	OFFICE	MAN+W	INSTIT	RETAIL	SERVCE	OTHER	TOTAL
(1) CENTRAL AREA CORDON														
1983	193,705	18,690	33,855	20,688	24,629	4,161	295,728	199,851	19,898	38,612	27,320	30,206	6,347	322,234
1984	201,574	18,022	34,330	18,411	24,771	4,932	302,040	208,468	19,296	39,795	26,215	31,653	7,544	332,971
1985	201,319	18,501	35,268	18,587	24,949	5,076	303,700	210,614	19,742	40,472	26,634	32,443	9,013	338,918
1986	207,343	16,876	37,183	18,607	26,575	4,694	311,278	219,401	18,510	44,830	27,783	35,141	9,120	354,785
1987	220,280	16,266	40,903	18,924	28,086	5,781	330,240	232,614	17,560	47,747	28,048	37,037	10,036	373,042
(2) DOWNTOWN CORE CORDON														
1983	93,337	895	2,855	8,115	7,662	1,275	114,139	95,795	951	3,415	12,139	9,750	1,556	123,606
1984	100,741	721	2,593	5,837	7,716	870	118,478	103,045	785	3,073	10,216	10,169	1,365	128,653
1985	97,573	949	2,036	5,692	7,412	1,158	114,820	100,785	1,032	2,952	9,999	10,220	1,912	126,900
1986	99,164	927	2,604	5,861	7,408	1,247	117,211	102,807	1,087	3,250	10,645	10,449	1,941	130,179
1987	104,377	872	2,624	5,707	7,403	1,286	122,269	108,716	924	3,027	10,484	11,057	1,732	135,940
(3) EXTENDED CORE CORDON														
1983	107,635	2,622	3,617	8,563	9,600	1,980	134,017	110,286	2,796	4,195	12,684	12,333	2,365	144,659
1984	116,129	2,336	3,469	6,565	10,131	1,723	140,353	118,817	2,516	4,002	11,150	13,329	2,330	152,144
1985	113,413	2,670	3,015	6,502	10,082	2,554	138,236	117,096	2,881	3,990	11,073	13,631	3,683	152,354
1986	114,976	2,363	3,611	6,532	10,117	2,212	139,811	119,866	2,656	4,345	11,690	14,031	3,319	155,907
1987	122,584	2,370	3,995	6,568	11,422	2,051	148,990	128,151	2,462	4,416	11,752	15,947	3,464	166,192
(4) DOWNTOWN CORDON														
1983	142,470	1,934	15,176	13,769	15,229	2,022	190,600	146,319	2,768	17,373	19,089	18,896	3,828	208,273
1984	150,559	1,566	14,550	10,812	15,348	2,294	195,129	154,915	2,420	16,792	17,054	19,899	4,361	215,441
1985	147,446	1,805	15,210	10,792	15,040	2,124	192,417	153,422	2,676	18,120	17,128	20,055	5,088	216,489
1986	152,864	1,872	16,896	11,147	15,454	2,002	200,235	160,524	2,872	20,629	18,241	21,047	5,200	228,513
1987	163,466	1,670	17,075	11,225	15,368	2,681	211,485	171,490	2,504	20,222	18,363	21,507	5,529	239,615

EXHIBIT A.2:
VEHICLE TRIPS CROSSING CENTRAL AREA CORDON, 1975-1987

	7:00 A.M. - 10:00 A.M. A.M. Peak Period - Inbound							3:30 P.M. - 6:30 P.M. P.M. Peak Period - Outbound						
	Total	Autos & Taxis		Trucks		Transit Veh.		Total	Autos & Taxis		Trucks		Transit Veh.	
	Vehicles	Number	%	Number	%	Number	%	Vehicles	Number	%	Number	%	Number	%
West														
1975	33,437	29,014	86.8%	3,949	11.8%	474	1.4%	36,794	33,159	90.1%	3,123	8.5%	512	1.4%
1977	35,023	30,294	86.5%	4,259	12.2%	470	1.3%	37,385	33,572	89.8%	3,307	8.8%	506	1.4%
1979	36,092	31,051	86.0%	4,566	12.7%	475	1.3%	40,572	36,082	88.9%	4,000	9.9%	490	1.2%
1981	35,503	30,248	85.2%	4,780	13.5%	475	1.3%	35,594	31,295	87.9%	3,806	10.7%	493	1.4%
1983	37,617	32,585	86.6%	4,556	12.1%	476	1.3%	38,182	33,853	88.7%	3,863	10.1%	466	1.2%
1985	39,557	34,145	86.3%	4,948	12.5%	464	1.2%	40,099	35,315	88.1%	4,322	10.8%	462	1.2%
1987	37,561	31,900	84.9%	5,233	13.9%	428	1.1%	38,384	32,899	85.7%	5,075	13.2%	410	1.1%
North														
1975	18,417	17,168	93.2%	1,141	6.2%	108	0.7%	20,566	19,368	94.2%	1,064	5.2%	134	0.7%
1977	20,099	18,519	92.1%	1,420	7.1%	160	0.9%	21,692	20,275	93.5%	1,255	5.8%	162	0.7%
1979	19,745	17,907	90.7%	1,706	8.6%	132	0.7%	21,467	19,744	92.1%	1,575	7.3%	118	0.5%
1981	20,404	18,607	91.2%	1,666	8.2%	131	0.7%	22,039	20,358	92.4%	1,552	7.0%	129	0.6%
1983	19,801	18,088	91.3%	1,587	8.0%	126	0.7%	21,929	20,257	92.4%	1,566	7.1%	106	0.5%
1985	20,301	18,584	91.5%	1,603	7.9%	114	0.6%	22,508	20,727	92.1%	1,661	7.4%	120	0.5%
1987	22,532	20,104	89.2%	2,284	10.1%	144	0.6%	21,647	19,559	90.4%	1,978	9.1%	110	0.5%
East														
1975	40,229	35,303	87.8%	4,553	11.3%	373	0.9%	40,119	36,189	90.2%	3,541	8.8%	389	1.0%
1977	40,719	35,744	87.8%	4,616	11.3%	359	0.9%	40,233	35,751	88.9%	4,109	10.2%	373	0.9%
1979	46,599	40,838	87.6%	5,415	11.6%	346	0.7%	42,561	37,796	88.8%	4,405	10.3%	360	0.8%
1981	42,743	36,861	86.2%	5,440	12.7%	442	1.0%	42,575	37,768	88.7%	4,422	10.4%	385	0.9%
1983	42,345	36,612	86.5%	5,281	12.5%	452	1.1%	41,954	37,284	88.9%	4,229	10.1%	441	1.1%
1985	42,896	36,977	86.2%	5,496	12.8%	423	1.0%	44,018	38,783	88.1%	4,825	11.0%	410	0.9%
1987	47,090	40,468	85.9%	6,226	13.2%	396	0.8%	45,232	39,224	86.7%	5,601	12.4%	407	0.9%
TOTAL														
1975	92,083	81,485	88.5%	9,643	10.5%	955	1.0%	97,479	88,716	91.0%	7,728	7.9%	1,035	1.1%
1977	95,841	84,557	88.2%	10,295	10.7%	989	1.0%	99,310	88,598	90.2%	8,671	8.7%	1,041	1.0%
1979	102,436	89,796	87.7%	11,687	11.4%	953	0.9%	104,600	93,652	89.5%	9,980	9.5%	968	0.9%
1981	98,650	85,716	86.9%	11,886	12.0%	1,048	1.1%	100,208	89,421	89.2%	9,780	9.8%	1,007	1.0%
1983	99,763	87,285	87.5%	11,424	11.5%	1,054	1.1%	102,065	91,394	89.5%	9,658	9.5%	1,013	1.0%
1985	102,754	89,706	87.3%	12,047	11.7%	1,001	1.0%	106,625	94,825	88.9%	10,808	10.1%	992	0.9%
1987	107,183	92,472	86.3%	13,743	12.8%	968	0.9%	105,263	91,682	87.1%	12,654	12.0%	927	0.9%

Source: Metro Cordon Count Program

EXHIBIT A.3:
VEHICLE TRIPS CROSSING EXTENDED CORE CORDON, 1985-1987

	7:00 A.M. - 10:00 A.M. A.M. Peak Period - Inbound							3:30 P.M. - 6:30 P.M. P.M. Peak Period - Outbound						
	Total	Autos & Taxis		Trucks		Transit Veh.		Total	Autos & Taxis		Trucks		Transit Veh.	
	Vehicles	Number	%	Number	%	Number	%	Vehicles	Number	%	Number	%	Number	%
West														
1985	35,385	30,673	86.7%	4,422	12.5%	290	0.8%	36,844	32,647	88.6%	3,904	10.6%	293	0.8%
1986	38,254	33,369	87.2%	4,605	12.0%	280	0.7%	33,517	29,345	87.6%	3,895	11.6%	277	0.8%
1987	32,767	27,864	85.0%	4,616	14.1%	287	0.9%	36,871	32,059	86.9%	4,506	12.2%	306	0.8%
North														
1985	13,132	11,591	88.3%	1,327	10.1%	214	1.6%	15,509	14,134	91.1%	1,161	7.5%	214	1.4%
1986	13,410	11,715	87.4%	1,482	11.1%	213	1.6%	16,981	15,338	90.3%	1,439	8.5%	204	1.2%
1987	13,807	11,927	86.4%	1,702	12.3%	178	1.3%	15,597	13,656	87.6%	1,735	11.1%	206	1.3%
East														
1985	25,583	21,861	85.5%	3,448	13.5%	274	1.1%	29,589	25,815	87.2%	3,500	11.8%	274	0.9%
1986	32,279	27,421	84.9%	4,553	14.1%	305	0.9%	29,569	25,922	87.7%	3,358	11.4%	289	1.0%
1987	32,953	28,071	85.2%	4,557	13.8%	325	1.0%	27,786	23,806	85.7%	3,734	13.4%	246	0.9%
TOTAL														
1985	74,100	64,125	86.5%	9,197	12.4%	778	1.0%	81,942	72,596	88.6%	8,565	10.5%	781	1.0%
1986	83,943	72,505	86.4%	10,640	12.7%	798	1.0%	80,067	70,605	88.2%	8,692	10.9%	770	1.0%
1987	79,527	67,862	85.3%	10,875	13.7%	790	1.0%	80,254	69,521	86.6%	9,975	12.4%	758	0.9%

Source: Metro Cordon Count Program

EXHIBIT A.4:
VEHICLE TRIPS CROSSING DOWNTOWN CORE CORDON, 1975-1986

	7:00 A.M. - 10:00 A.M. A.M. Peak Period - Inbound							3:30 P.M. - 6:30 P.M. P.M. Peak Period - Outbound						
	Total	Autos & Taxis		Trucks		Transit Veh.		Total	Autos & Taxis		Trucks		Transit Veh.	
	Vehicles	Number	%	Number	%	Number	%	Vehicles	Number	%	Number	%	Number	%
West														
1975	6,644	5,483	82.5%	895	13.5%	266	4.0%	11,521	10,316	89.5%	815	7.1%	390	3.4%
1977	7,130	6,018	84.4%	829	11.6%	283	4.0%	12,579	11,355	90.3%	823	6.5%	401	3.2%
1979	7,173	5,941	82.8%	960	13.4%	272	3.8%	13,038	11,680	89.6%	966	7.4%	392	3.0%
1981	6,541	5,477	83.7%	843	12.9%	221	3.4%	12,917	11,612	89.9%	1,000	7.7%	305	2.4%
1982	6,764	5,638	83.4%	918	13.6%	208	3.1%	12,842	11,559	90.0%	980	7.6%	303	2.4%
1984	7,553	6,349	84.1%	980	13.0%	224	3.0%	14,626	13,064	89.3%	1,233	8.4%	329	2.2%
1986	8,549	7,316	85.6%	1,036	12.1%	197	2.3%	14,183	12,569	88.6%	1,306	9.2%	308	2.2%
North														
1975	6,053	5,106	84.4%	764	12.6%	183	3.0%	7,230	6,601	91.3%	487	6.7%	142	2.0%
1977	6,022	5,168	85.8%	663	11.0%	191	3.2%	7,693	6,981	90.7%	556	7.2%	156	2.0%
1979	6,486	5,409	83.4%	860	13.3%	217	3.3%	8,439	7,622	90.3%	675	8.0%	142	1.7%
1981	6,437	5,443	84.6%	822	12.8%	172	2.7%	8,880	8,058	90.7%	683	7.7%	139	1.6%
1982	6,332	5,327	84.1%	844	13.3%	161	2.5%	8,546	7,783	91.1%	627	7.3%	136	1.6%
1984	6,920	5,974	86.3%	769	11.1%	177	2.6%	8,948	8,058	90.1%	716	8.0%	174	1.9%
1986	7,111	5,960	83.8%	963	13.5%	188	2.6%	9,379	8,327	88.8%	894	9.5%	158	1.7%
East														
1975	11,416	10,004	87.6%	1,156	10.1%	256	2.2%	11,057	9,941	89.9%	844	7.6%	272	2.5%
1977	12,003	10,534	87.8%	1,238	10.3%	231	1.9%	11,363	10,213	89.9%	909	8.0%	241	2.1%
1979	12,825	11,277	87.9%	1,329	10.4%	219	1.7%	11,785	10,496	89.1%	1,054	8.9%	235	2.0%
1981	15,484	13,405	86.6%	1,865	12.0%	214	1.4%	11,725	10,376	88.5%	1,174	10.0%	175	1.5%
1982	12,921	11,375	88.0%	1,348	10.4%	198	1.5%	12,206	10,959	89.8%	1,020	8.4%	227	1.9%
1984	15,473	13,720	88.7%	1,542	10.0%	211	1.4%	12,966	11,650	89.9%	1,099	8.5%	217	1.7%
1986	14,034	12,192	86.9%	1,643	11.7%	199	1.4%	13,148	11,718	89.1%	1,219	9.3%	211	1.6%
South														
1975	7,936	7,094	89.4%	671	8.5%	171	2.2%	4,921	4,316	87.7%	485	9.9%	120	2.4%
1977	8,315	7,485	90.0%	685	8.2%	145	1.7%	4,663	4,189	89.8%	341	7.3%	133	2.9%
1979	8,090	7,197	89.0%	737	9.1%	156	1.9%	4,893	4,369	89.3%	410	8.4%	114	2.3%
1981	8,225	7,092	86.2%	972	11.8%	161	2.0%	3,588	3,159	88.0%	313	8.7%	116	3.2%
1982	8,469	7,471	88.2%	841	9.9%	157	1.9%	4,466	3,974	89.0%	402	9.0%	90	2.0%
1984	8,943	7,859	87.9%	924	10.3%	160	1.8%	5,030	4,534	90.1%	393	7.8%	103	2.0%
1986	10,167	8,961	88.1%	1,094	10.8%	112	1.1%	4,670	4,060	86.9%	525	11.2%	85	1.8%
TOTAL														
1975	32,049	27,687	86.4%	3,486	10.9%	876	2.7%	34,729	31,174	89.8%	2,631	7.6%	924	2.7%
1977	33,470	29,205	87.3%	3,415	10.2%	850	2.5%	36,298	32,738	90.2%	2,629	7.2%	931	2.6%
1979	34,574	29,824	86.3%	3,886	11.2%	864	2.5%	38,155	34,167	89.5%	3,105	8.1%	883	2.3%
1981	36,687	31,417	85.6%	4,502	12.3%	768	2.1%	37,110	33,205	89.5%	3,170	8.5%	735	2.0%
1982	34,486	29,811	86.4%	3,951	11.5%	724	2.1%	38,060	34,275	90.1%	3,029	8.0%	756	2.0%
1984	38,889	33,902	87.2%	4,215	10.8%	772	2.0%	41,570	37,306	89.7%	3,441	8.3%	823	2.0%
1986	39,861	34,429	86.4%	4,736	11.9%	696	1.7%	41,380	36,674	88.6%	3,944	9.5%	762	1.8%

Source: Metro Cordon Count Program

EXHIBIT A.5:
VEHICLE TRIPS CROSSING DOWNTOWN CORDON, 1975-1986

	7:00 A.M. - 10:00 A.M. A.M. Peak Period - Inbound							3:30 P.M. - 6:30 P.M. P.M. Peak Period - Outbound						
	Total	Autos & Taxis		Trucks		Transit Veh.		Total	Autos & Taxis		Trucks		Transit Veh.	
	Vehicles	Number	%	Number	%	Number	%	Vehicles	Number	%	Number	%	Number	%
West														
1975	19,741	16,872	85.5%	2,319	11.7%	550	2.8%	28,028	25,422	90.7%	1,959	7.0%	647	2.3%
1977	20,470	17,659	86.3%	2,225	10.9%	586	2.9%	30,230	27,549	91.1%	2,016	6.7%	665	2.2%
1979	20,168	17,068	84.6%	2,538	12.6%	562	2.8%	29,823	26,845	90.0%	2,334	7.8%	644	2.2%
1981	20,536	17,271	84.1%	2,715	13.2%	550	2.7%	30,016	26,942	89.8%	2,505	8.3%	569	1.9%
1982	20,080	17,041	84.9%	2,531	12.6%	508	2.5%	29,664	26,655	89.9%	2,437	8.2%	572	1.9%
1984	22,355	19,162	85.7%	2,656	11.9%	537	2.4%	33,295	29,982	90.0%	2,704	8.1%	609	1.8%
1986	24,278	20,803	85.7%	2,949	12.1%	526	2.2%	32,637	29,123	89.2%	2,946	9.0%	568	1.7%
North														
1975	5,476	5,038	92.0%	416	7.6%	22	0.4%	6,214	5,845	94.1%	334	5.4%	35	0.6%
1977	4,543	4,160	91.6%	362	8.0%	21	0.5%	5,515	5,131	93.0%	362	6.6%	22	0.4%
1979	5,294	4,775	90.2%	503	9.5%	16	0.3%	6,431	5,979	93.0%	433	6.7%	19	0.3%
1981	5,382	4,814	89.4%	544	10.1%	24	0.4%	6,460	5,981	92.6%	464	7.2%	15	0.2%
1982	5,682	5,181	91.2%	483	8.5%	18	0.3%	6,699	6,224	92.9%	456	6.8%	19	0.3%
1984	5,643	5,101	90.4%	523	9.3%	19	0.3%	6,315	5,874	93.0%	432	6.8%	9	0.1%
1986	5,944	5,338	89.8%	596	10.0%	10	0.2%	6,904	6,256	90.6%	626	9.1%	22	0.3%
East														
1975	24,575	21,851	88.9%	2,288	9.3%	436	1.8%	24,443	22,235	91.0%	1,746	7.1%	462	1.9%
1977	25,767	22,985	89.2%	2,377	9.2%	405	1.6%	27,245	24,883	91.3%	1,957	7.2%	405	1.5%
1979	27,079	24,000	88.6%	2,691	9.9%	388	1.4%	26,671	24,105	90.4%	2,151	8.1%	415	1.6%
1981	29,694	25,847	87.0%	3,396	11.4%	451	1.5%	26,786	23,991	89.6%	2,406	9.0%	389	1.5%
1982	26,254	23,063	87.8%	2,742	10.4%	449	1.7%	27,081	24,393	90.1%	2,260	8.3%	428	1.6%
1984	30,778	27,426	89.1%	2,930	9.5%	422	1.4%	28,032	25,323	90.3%	2,266	8.1%	443	1.6%
1986	29,013	25,375	87.5%	3,215	11.1%	423	1.5%	28,309	25,412	89.8%	2,486	8.8%	411	1.5%
South														
1975	7,936	7,094	89.4%	671	8.5%	171	2.2%	4,921	4,316	87.7%	485	9.9%	120	2.4%
1977	8,315	7,485	90.0%	685	8.2%	145	1.7%	4,663	4,189	89.8%	341	7.3%	133	2.9%
1979	8,090	7,197	89.0%	737	9.1%	156	1.9%	4,893	4,369	89.3%	410	8.4%	114	2.3%
1981	8,225	7,092	86.2%	972	11.8%	161	2.0%	3,588	3,159	88.0%	313	8.7%	116	3.2%
1982	8,469	7,471	88.2%	841	9.9%	157	1.9%	4,466	3,974	89.0%	402	9.0%	90	2.0%
1984	8,943	7,859	87.9%	924	10.3%	160	1.8%	5,030	4,534	90.1%	393	7.8%	103	2.0%
1986	10,167	8,961	88.1%	1,094	10.8%	112	1.1%	4,670	4,060	86.9%	525	11.2%	85	1.8%
TOTAL														
1975	57,728	50,855	88.1%	5,694	9.9%	1,179	2.0%	63,606	57,818	90.9%	4,524	7.1%	1,264	2.0%
1977	59,095	52,289	88.5%	5,649	9.6%	1,157	2.0%	67,653	61,752	91.3%	4,676	6.9%	1,225	1.8%
1979	60,631	53,040	87.5%	6,469	10.7%	1,122	1.9%	67,818	61,298	90.4%	5,328	7.9%	1,192	1.8%
1981	63,837	55,024	86.2%	7,627	11.9%	1,186	1.9%	66,850	60,073	89.9%	5,688	8.5%	1,089	1.6%
1982	60,485	52,756	87.2%	6,597	10.9%	1,132	1.9%	67,910	61,246	90.2%	5,555	8.2%	1,109	1.6%
1984	67,719	59,548	87.9%	7,033	10.4%	1,138	1.7%	72,672	65,713	90.4%	5,795	8.0%	1,164	1.6%
1986	69,402	60,477	87.1%	7,854	11.3%	1,071	1.5%	72,520	64,851	89.4%	6,583	9.1%	1,086	1.5%

Source: Metro Cordon Count Program

EXHIBIT A.6:
PERSON TRIPS CROSSING CENTRAL AREA CORDON, 1975-1987

	7:00 A.M. - 10:00 A.M. A.M. Peak Period - Inbound							3:30 P.M. - 6:30 P.M. P.M. Peak Period - Outbound						
	Total	Auto & Taxi		Transit		GO Rail		Total	Auto & Taxi		Transit		GO Rail	
	Persons	Number	%	Number	%	Number	%	Persons	Number	%	Number	%	Number	%
West														
1975	104,644	38,254	36.6%	60,214	57.5%	6,176	5.9%	110,814	46,202	41.7%	58,529	52.8%	6,083	5.5%
1977	106,938	39,535	37.0%	59,603	55.7%	7,800	7.3%	119,172	46,563	39.7%	62,316	53.2%	8,293	7.1%
1979	103,911	40,604	39.1%	53,958	51.9%	9,349	9.0%	124,850	53,492	42.8%	61,985	49.6%	9,373	7.5%
1981	108,140	38,578	35.7%	57,339	53.0%	12,223	11.3%	116,068	41,695	35.9%	62,440	53.8%	11,933	10.3%
1983	113,499	42,407	37.4%	58,277	51.3%	12,815	11.3%	116,551	45,121	38.7%	59,197	50.8%	12,233	10.5%
1985	113,135	42,954	38.0%	55,480	49.0%	14,701	13.0%	113,252	46,253	40.8%	53,172	47.0%	13,827	12.2%
1987	111,405	39,184	35.2%	55,776	50.1%	16,445	14.8%	115,754	42,997	37.1%	56,939	49.2%	15,818	13.7%
North														
1975	64,292	22,033	34.3%	42,259	65.7%			71,742	25,900	36.1%	45,842	63.9%		
1977	77,374	23,721	30.7%	53,653	69.3%			74,210	26,833	36.2%	47,377	63.8%		
1979	75,982	22,766	30.0%	53,216	70.0%			86,628	26,246	30.3%	60,382	69.7%		
1981	86,413	22,769	26.3%	63,644	73.7%			89,801	26,525	29.5%	63,276	70.5%		
1983	85,790	22,616	26.4%	63,174	73.6%			93,032	27,153	29.2%	65,879	70.8%		
1985	85,443	22,850	26.7%	62,593	73.3%			95,079	27,119	28.5%	67,960	71.5%		
1987	89,123	24,157	27.1%	64,966	72.9%			92,294	24,822	26.9%	67,472	73.1%		
East														
1975	99,187	46,850	47.2%	48,431	48.8%	3,906	3.9%	105,166	48,735	46.3%	53,114	50.5%	3,317	3.2%
1977	94,636	47,169	49.8%	42,852	45.3%	4,615	4.9%	103,831	48,123	46.3%	51,445	49.5%	4,263	4.1%
1979	107,617	56,645	52.6%	44,202	41.1%	6,770	6.3%	103,521	51,045	49.3%	45,979	44.4%	6,497	6.3%
1981	113,818	48,705	42.8%	56,954	50.0%	8,159	7.2%	110,644	50,420	45.6%	52,789	47.7%	7,435	6.7%
1983	107,152	47,294	44.1%	51,915	48.4%	7,943	7.4%	110,124	49,321	44.8%	53,710	48.8%	7,093	6.4%
1985	101,964	47,769	46.8%	45,426	44.6%	8,769	8.6%	114,896	50,823	44.2%	55,368	48.2%	8,705	7.6%
1987	116,805	49,865	42.7%	57,298	49.1%	9,642	8.3%	116,555	50,559	43.4%	56,916	48.8%	9,080	7.8%
TOTAL														
1975	268,123	107,137	40.0%	150,904	56.3%	10,082	3.8%	287,722	120,837	42.0%	157,485	54.7%	9,400	3.3%
1977	278,948	110,425	39.6%	156,108	56.0%	12,415	4.5%	295,213	121,519	41.2%	161,138	54.6%	12,556	4.3%
1979	287,510	120,015	41.7%	151,376	52.7%	16,119	5.6%	314,999	130,783	41.5%	168,346	53.4%	15,870	5.0%
1981	308,371	110,052	35.7%	177,937	57.7%	20,382	6.6%	316,513	118,640	37.5%	178,505	56.4%	19,368	6.1%
1983	306,441	112,317	36.7%	173,366	56.6%	20,758	6.8%	319,707	121,595	38.0%	178,786	55.9%	19,326	6.0%
1985	300,542	113,573	37.8%	163,499	54.4%	23,470	7.8%	323,227	124,195	38.4%	176,500	54.6%	22,532	7.0%
1987	317,333	113,206	35.7%	178,040	56.1%	26,087	8.2%	324,603	118,378	36.5%	181,327	55.9%	24,898	7.7%

Source: Metro Cordon Count Program

EXHIBIT A.7:
PERSON TRIPS CROSSING EXTENDED CORE CORDON, 1985-1987

	7:00 A.M. - 10:00 A.M. A.M. Peak Period - Inbound							3:30 P.M. - 6:30 P.M. P.M. Peak Period - Outbound						
	Total	Auto & Taxi		Transit		GO Rail		Total	Auto & Taxi		Transit		GO Rail	
	Persons	Number	%	Number	%	Number	%	Persons	Number	%	Number	%	Number	%
West														
1985	61,387	37,909	61.8%	8,777	14.3%	14,701	23.9%	65,620	42,210	64.3%	9,583	14.6%	13,827	21.1%
1986	66,719	43,347	65.0%	8,793	13.2%	14,579	21.9%	59,239	37,245	62.9%	8,194	13.8%	13,800	23.3%
1987	56,173	33,082	58.9%	6,646	11.8%	16,445	29.3%	65,144	41,702	64.0%	7,624	11.7%	15,818	24.3%
North														
1985	79,076	14,260	18.0%	64,816	82.0%			89,470	18,503	20.7%	70,967	79.3%		
1986	81,235	13,710	16.9%	67,525	83.1%			85,950	19,908	23.2%	66,042	76.8%		
1987	95,064	14,406	15.2%	80,658	84.8%			86,516	17,573	20.3%	68,943	79.7%		
East														
1985	42,127	27,788	66.0%	5,570	13.2%	8,769	20.8%	48,922	33,279	68.0%	6,938	14.2%	8,705	17.8%
1986	51,012	34,461	67.6%	7,604	14.9%	8,947	17.5%	51,089	34,569	67.7%	7,949	15.6%	8,571	16.8%
1987	52,148	34,899	66.9%	7,607	14.6%	9,642	18.5%	44,241	30,447	68.8%	4,714	10.7%	9,080	20.5%
TOTAL														
1985	182,590	79,957	43.8%	79,163	43.4%	23,470	12.9%	204,012	93,992	46.1%	87,488	42.9%	22,532	11.0%
1986	198,966	91,518	46.0%	83,922	42.2%	23,526	11.8%	196,278	91,722	46.7%	82,185	41.9%	22,371	11.4%
1987	203,385	82,387	40.5%	94,911	46.7%	26,087	12.8%	195,901	89,722	45.8%	81,281	41.5%	24,898	12.7%

Source: Metro Cordon Count Program

EXHIBIT A.8:
PERSON TRIPS CROSSING DOWNTOWN CORE CORDON, 1975-1986

	7:00 A.M. - 10:00 A.M. A.M. Peak Period - Inbound							3:30 P.M. - 6:30 P.M. P.M. Peak Period - Outbound						
	Total	Auto & Taxi		Transit		GO Rail		Total	Auto & Taxi		Transit		GO Rail	
	Persons	Number	%	Number	%	Number	%	Persons	Number	%	Number	%	Number	%
West														
1975	13,282	7,026	52.9%	6,256	47.1%			22,905	14,082	61.5%	8,823	38.5%		
1977	12,935	7,430	57.4%	5,505	42.6%			24,104	15,131	62.8%	8,973	37.2%		
1979	13,085	7,190	54.9%	5,895	45.1%			23,905	15,947	66.7%	7,958	33.3%		
1981	11,927	6,447	54.1%	5,480	45.9%			23,312	14,917	64.0%	8,395	36.0%		
1982	11,865	6,862	57.8%	5,003	42.2%			22,260	14,635	65.7%	7,625	34.3%		
1984	12,596	7,720	61.3%	4,876	38.7%			25,959	17,473	67.3%	8,486	32.7%		
1986	13,371	8,761	65.5%	4,610	34.5%			23,715	15,913	67.1%	7,802	32.9%		
North														
1975	70,168	6,551	9.3%	63,617	90.7%			63,870	9,443	14.8%	54,427	85.2%		
1977	67,223	6,364	9.5%	60,859	90.5%			74,932	9,536	12.7%	65,396	87.3%		
1979	70,061	6,685	9.5%	63,376	90.5%			67,738	10,213	15.1%	57,525	84.9%		
1981	78,365	6,796	8.7%	71,569	91.3%			79,985	11,089	13.9%	68,896	86.1%		
1982	80,644	6,519	8.1%	74,125	91.9%			78,243	10,001	12.8%	68,242	87.2%		
1984	80,432	7,297	9.1%	73,135	90.9%			76,433	10,727	14.0%	65,706	86.0%		
1986	74,276	6,957	9.4%	67,319	90.6%			76,384	10,901	14.3%	65,483	85.7%		
East														
1975	21,859	13,776	63.0%	8,083	37.0%			22,397	14,083	62.9%	8,314	37.1%		
1977	21,927	14,168	64.6%	7,759	35.4%			22,509	14,760	65.6%	7,749	34.4%		
1979	23,097	15,314	66.3%	7,783	33.7%			22,053	14,509	65.8%	7,544	34.2%		
1981	24,267	17,459	71.9%	6,808	28.1%			22,383	14,541	65.0%	7,842	35.0%		
1982	22,011	15,097	68.6%	6,914	31.4%			23,915	15,413	64.4%	8,502	35.6%		
1984	24,476	18,166	74.2%	6,310	25.8%			22,325	15,613	69.9%	6,712	30.1%		
1986	22,448	15,905	70.9%	6,543	29.1%			22,566	15,693	69.5%	6,873	30.5%		
South														
1975	20,678	9,570	46.3%	1,096	5.3%	10,012	48.4%	16,439	6,413	39.0%	1,111	6.8%	8,915	54.2%
1977	23,631	10,140	42.9%	1,056	4.5%	12,435	52.6%	20,273	6,457	31.9%	1,260	6.2%	12,556	61.9%
1979	26,710	9,459	35.4%	1,132	4.2%	16,119	60.3%	22,946	6,518	28.4%	858	3.7%	15,570	67.9%
1981	31,002	9,326	30.1%	1,294	4.2%	20,382	65.7%	25,295	4,538	17.9%	1,389	5.5%	19,368	76.6%
1982	31,139	9,110	29.3%	1,116	3.6%	20,913	67.2%	26,487	5,804	21.9%	703	2.7%	19,980	75.4%
1984	34,302	10,467	30.5%	989	2.9%	22,846	66.6%	29,156	6,338	21.7%	1,148	3.9%	21,670	74.3%
1986	36,143	11,581	32.0%	1,036	2.9%	23,526	65.1%	29,115	5,691	19.5%	1,053	3.6%	22,371	76.8%
TOTAL														
1975	125,987	36,923	29.3%	79,052	62.7%	10,012	7.9%	125,611	44,021	35.0%	72,675	57.9%	8,915	7.1%
1977	125,716	38,102	30.3%	75,179	59.8%	12,435	9.9%	141,818	45,884	32.4%	83,378	58.8%	12,556	8.9%
1979	132,953	38,648	29.1%	78,186	58.8%	16,119	12.1%	136,642	47,187	34.5%	73,885	54.1%	15,570	11.4%
1981	145,561	40,028	27.5%	85,151	58.5%	20,382	14.0%	150,975	45,085	29.9%	86,522	57.3%	19,368	12.8%
1982	145,659	37,588	25.8%	87,158	59.8%	20,913	14.4%	150,905	45,853	30.4%	85,072	56.4%	19,980	13.2%
1984	151,806	43,650	28.8%	85,310	56.2%	22,846	15.0%	153,873	50,151	32.6%	82,052	53.3%	21,670	14.1%
1986	146,238	43,204	29.5%	79,508	54.4%	23,526	16.1%	151,780	48,198	31.8%	81,211	53.5%	22,371	14.7%

Source: Metro Cordon Count Program

EXHIBIT A.9:
PERSON TRIPS CROSSING DOWNTOWN CORDON, 1975-1986

	7:00 A.M. - 10:00 A.M. A.M. Peak Period - Inbound							3:30 P.M. - 6:30 P.M. P.M. Peak Period - Outbound						
	Total	Auto & Taxi		Transit		GO Rail		Total	Auto & Taxi		Transit		GO Rail	
	Persons	Number	%	Number	%	Number	%	Persons	Number	%	Number	%	Number	%
West														
1975	88,013	21,535	24.5%	66,478	75.5%			110,689	35,028	31.6%	75,661	68.4%		
1977	81,958	21,893	26.7%	60,065	73.3%			103,066	36,943	35.8%	66,123	64.2%		
1979	96,686	22,065	22.8%	74,621	77.2%			113,946	36,279	31.8%	77,667	68.2%		
1981	105,951	20,895	19.7%	85,056	80.3%			118,996	35,589	29.9%	83,407	70.1%		
1982	104,789	20,956	20.0%	83,833	80.0%			126,688	35,047	27.7%	91,641	72.3%		
1984	111,439	23,205	20.8%	88,234	79.2%			121,664	39,805	32.7%	81,859	67.3%		
1986	101,406	25,001	24.7%	76,405	75.3%			121,126	37,781	31.2%	83,345	68.8%		
North														
1975	55,719	6,598	11.8%	49,121	88.2%			62,360	7,965	12.8%	54,395	87.2%		
1977	55,044	5,313	9.7%	49,731	90.3%			55,991	7,136	12.7%	48,855	87.3%		
1979	43,672	6,017	13.8%	37,655	86.2%			48,782	8,083	16.6%	40,699	83.4%		
1981	57,431	5,911	10.3%	51,520	89.7%			56,219	8,103	14.4%	48,116	85.6%		
1982	49,712	6,517	13.1%	43,195	86.9%			54,657	8,254	15.1%	46,403	84.9%		
1984	49,256	6,300	12.8%	42,956	87.2%			53,774	7,705	14.3%	46,069	85.7%		
1986	46,694	6,455	13.8%	40,239	86.2%			52,380	8,272	15.8%	44,108	84.2%		
East														
1975	79,554	29,576	37.2%	49,978	62.8%			83,548	30,956	37.1%	52,592	62.9%		
1977	81,762	30,401	37.2%	51,361	62.8%			87,456	34,731	39.7%	52,725	60.3%		
1979	79,302	32,131	40.5%	47,171	59.5%			83,893	32,855	39.2%	51,038	60.8%		
1981	87,304	33,883	38.8%	53,421	61.2%			88,225	33,036	37.4%	55,189	62.6%		
1982	84,360	30,384	36.0%	53,976	64.0%			94,128	33,483	35.6%	60,645	64.4%		
1984	93,241	35,653	38.2%	57,588	61.8%			90,173	33,980	37.7%	56,193	62.3%		
1986	87,582	32,308	36.9%	55,274	63.1%			90,189	33,860	37.5%	56,329	62.5%		
South														
1975	20,678	9,570	46.3%	1,096	5.3%	10,012	48.4%	16,439	6,413	39.0%	1,111	6.8%	8,915	54.2%
1977	23,631	10,140	42.9%	1,056	4.5%	12,435	52.6%	20,273	6,457	31.9%	1,260	6.2%	12,556	61.9%
1979	26,710	9,459	35.4%	1,132	4.2%	16,119	60.3%	22,946	6,518	28.4%	858	3.7%	15,570	67.9%
1981	31,002	9,326	30.1%	1,294	4.2%	20,382	65.7%	25,295	4,538	17.9%	1,389	5.5%	19,368	76.6%
1982	31,139	9,110	29.3%	1,116	3.6%	20,913	67.2%	26,487	5,804	21.9%	703	2.7%	19,980	75.4%
1984	34,302	10,467	30.5%	989	2.9%	22,846	66.6%	29,156	6,338	21.7%	1,148	3.9%	21,670	74.3%
1986	36,143	11,581	32.0%	1,036	2.9%	23,526	65.1%	29,115	5,691	19.5%	1,053	3.6%	22,371	76.8%
TOTAL														
1975	243,964	67,279	27.6%	166,673	68.3%	10,012	4.1%	273,036	80,362	29.4%	183,759	67.3%	8,915	3.3%
1977	242,395	67,747	27.9%	162,213	66.9%	12,435	5.1%	266,786	85,267	32.0%	168,963	63.3%	12,556	4.7%
1979	246,370	69,672	28.3%	160,579	65.2%	16,119	6.5%	269,567	83,735	31.1%	170,262	63.2%	15,570	5.8%
1981	281,688	70,015	24.9%	191,291	67.9%	20,382	7.2%	288,735	81,266	28.1%	188,101	65.1%	19,368	6.7%
1982	270,000	66,967	24.8%	182,120	67.5%	20,913	7.7%	301,960	82,588	27.4%	199,392	66.0%	19,980	6.6%
1984	288,238	75,625	26.2%	189,767	65.8%	22,846	7.9%	294,767	87,828	29.8%	185,269	62.9%	21,670	7.4%
1986	271,825	75,345	27.7%	172,954	63.6%	23,526	8.7%	292,810	85,604	29.2%	184,835	63.1%	22,371	7.6%

Source: Metro Cordon Count Program